

Sales and Service Reference Number

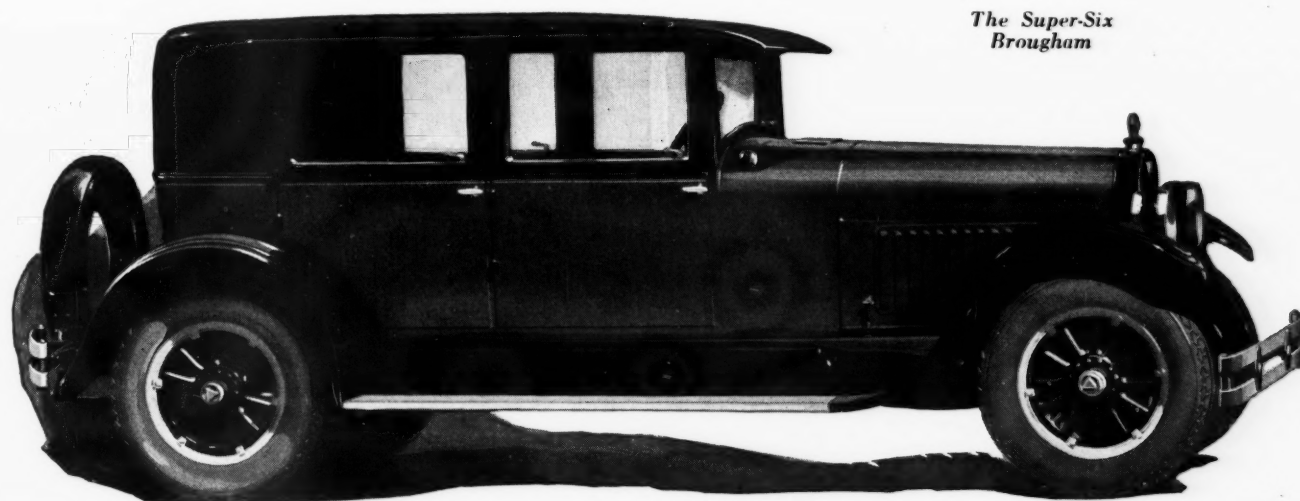
MOTOR AGE

Vol. XLIX
Number 18

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HUDSON-ESSEX



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Brougham*

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Continued leadership of quality has made Hudson-Essex for years the world's largest selling "Sixes".

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Their enormous and increasing sales success is simply a reflection of high public confidence and time-proven knowledge of their value.

HUDSON MOTOR CAR COMPANY, Detroit, Mich.

A GOOD MECHANIC USES GOOD TOOLS

February 15, 1926.

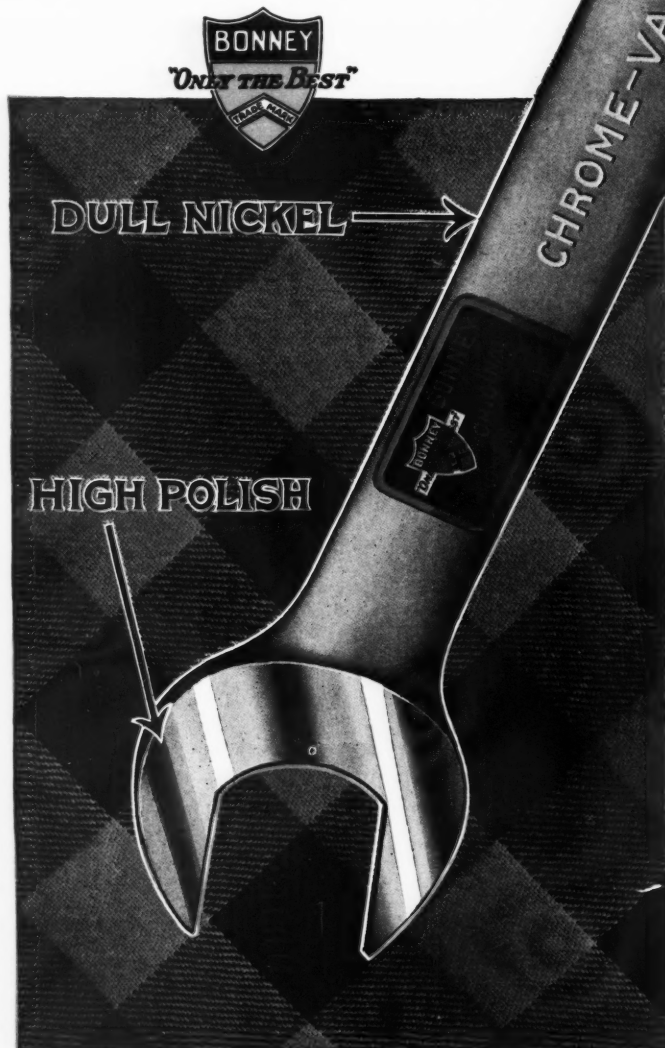
Bonney Forge & Tool Works,
Allentown, Pa.

Dear Sirs:

I thought I would drop you people a line in regards to the best wrench I have ever used. I have been using tools of all kinds ever since I was nine years old and I am now twenty-eight. My past trade has been a mechanic on all kinds of steam and gas engines, on highway and construction work, but now I own my own garage. Well, to make a long story short, I always look for the best tools I can buy. I mostly used — wrenches. One day I happened to get hold of two of your old wrenches. One is a No. 1028 S and the other a No. 1731 A. I did not think much of them at first; I thought they would spread or break. Well I will tell you now those two wrenches are worth more to me now than all my other tools put together. When all wrenches fail to move rusted or set nuts I get my Bonneys and they always do the trick. I only wish that space would permit me to write more of how your wrenches have gotten into tight places with no cussing or broken and skinned knuckles—and that is a lot in garage work. My only hope is to have every wrench in my shop a Bonney, both tappet and general service wrenches, before long. I hope and trust this line or so will help a little for your business as you have helped me.

Most truly yours,

James J. Britt, Prop.,
Service Garage,
Mechanicsville, N. Y.



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Contains six "CV" Engineer's type 15 degree angle wrenches with 12 different openings from $\frac{3}{8}$ " to 1". Price, east of Mississippi \$6.85 without Leatherette Roll. \$7.85 with Roll. Canadian and Western prices slightly higher.

Mr. Britt, whose letter is quoted above, is one of thousands of real mechanics who prefer
Bonney Wrenches

Chrome-Vanadium
registered
August 11th, 1925

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Bonney Forge & Tool Works
Allentown, Pa.

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BONNEY


Chrome **CV** Vanadium

WRENCHES

(Patents Pending)

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Those who desire the Buick Franchise should have their names on file.

the Better **BUICK**

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

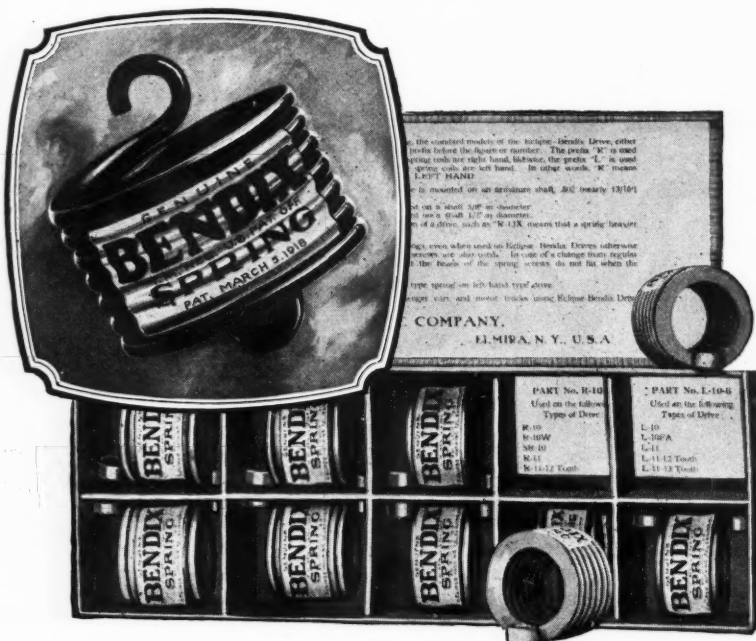
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Elmira, New York
Department 7

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MOTOR AGE

Reg. U. S. Pat. Office

Vol. XLIX

No. 18

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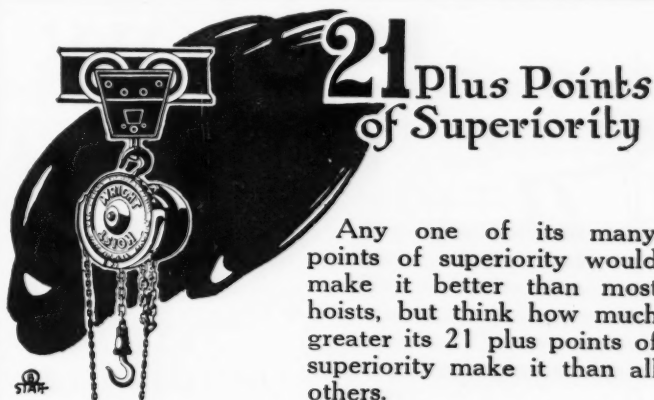
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Any one of its many points of superiority would make it better than most hoists, but think how much greater its 21 plus points of superiority make it than all others.

Write for details

1. **TIMKEN TAPERED ROLLER BEARINGS**
Eight to each trolley.
2. **STEEL SIDE PLATES**
Bumpers protect wheel flanges and treads.
3. **CHILLED TREAD WHEELS**
Absolute roundness insures ease in handling load.
4. **STEEL EQUALIZING PIN**
Permits placing trolley on I-Beam at any point and insures equal distribution of the load on the four wheels.
5. **STEEL HANGER PLATE**
May be eliminated and hook hung on equalizing pin to save headroom.
6. **UPPER STEEL HOOK—DROP FORGED—PROOF TESTED**
The strongest part of the hoist. This hook never opens to drop the hoist and load.
7. **STEEL DROP FORGED CROSS HEAD**
8. **SAFETY LOAD CHAIN GUARD**
Completely shrouds the upper half of load wheel, holding six links of load chain in wheel at all times.
9. **STEEL LOAD WHEEL**
Special analysis electric steel casting, annealed.
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To insure positive and easy lubrication at vital points.
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Where speed is greatest. Not subjected to heavy and shock loads. Eliminates wear on this part.
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Pressed from 3/4 plate. Insures permanency.
17. **STEEL CHAIN—ELECTRIC WELDED**
Special heat treated and proof tested. An elastic limit 4 1/2 times rated capacity, and breaking strength 6 1/2 times rated capacity.
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Never opens to drop the load.
19. **DETACHABLE STEEL COUPLING — DROP FORGED**
Completely enclosed Ball Bearing. Easily detachable to renew chain. Load is NOT held on connecting bolts but by the forgings.
20. **BALL THRUST BEARING ON BOTTOM SWIVEL HOOK**
Permits easy swiveling of load. Insures load chain hanging straight and feeding perfectly straight into load sheave pockets. This insures longer life to chain and wheel the greatest point of friction and wear.
21. **OIL CUPS SPRING COVER IN ALL OIL HOLES**

WRIGHT
 MANUFACTURING COMPANY
 LISBON, OHIO

HIGH SPEED HOIST UNIT

Ask Us About Them

Manufactured and sold in Canada by Riley Engineering & Supply Co., Ltd.,
 360 Dufferin St., Toronto 3, Canada.

How new is The **NEW STUTZ** ?

by F. E. Moskovics, President
STUTZ MOTOR CAR COMPANY of AMERICA, Inc.
Indianapolis

THE NEW STUTZ, as a complete automobile, is radically different from any other American passenger car; it is a composite of the most advanced engineering in each division of automobile design.

The NEW STUTZ is new because it is the first car in which the most highly developed type of every essential feature has been brought together and co-ordinated into one perfectly balanced automobile.

The NEW STUTZ is not new in the sense of having any features of an untried or experimental nature. Every improvement has been thoroughly tested and proved before its adoption.

The newness of The NEW STUTZ is the newness of leadership in the field of sound engineering; not the novelty of mere adventure or chance.

To select some of the outstanding features of The NEW STUTZ:

The worm-drive rear axle is new in the American passenger-car field. Yet it has long been standard in the most expensive European chasses. The NEW STUTZ worm-drive is designed and built by Timken, the world's greatest axle-building organization.

The NEW STUTZ hydrostatic four-wheel brakes operate upon a newly-utilized prin-

ciple. Yet the principle itself is as old as Harvey's discovery of the circulation of the blood. And again, this braking system was developed and is constructed by the Timken organization.

The NEW STUTZ motor introduces a new type into standard practise. Yet this motor has been in process of development for the past seven years, and it is the achievement, not of visionary inventors, but of a group of "old masters" of automotive engineering—so recognized by the entire industry.

And so on, throughout the car. Every feature is a proven one; every improvement a sound one. To repeat, The NEW STUTZ is new only in the sense that it represents the first co-ordination in one automobile of the world's most recent advancements in motor car design.

The kind of newness possessed by The NEW STUTZ is sufficient to make it the fastest-selling car in its price-class that the industry has ever known—and sufficient, it appears, to drive salesmen for obsoleted cars to the desperate and untenable expedient of crying down automotive progress.

The wise dealer will be found on the right side of the issue—for that is where the real money is being made.

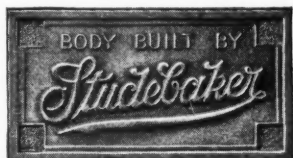
(Signed)

F. E. Moskovics



5 reasons why the
Studebaker franchise
grows more valuable
every day.

1. One-Profit Value
2. Unit-Built Construction
3. Always Kept Up-to-Date
4. Used Car Pledge
5. Lowest Time-Payment Rates



This symbol means that Studebaker prices do not
include the profits of outside body-makers

With these 5 major advantages and a line of cars that take full rank in dignified beauty, inbuilt stamina, inherent quality and value, the dealer with a Studebaker franchise will have no trouble in making money this year—and years to come.

The opportunity to represent Studebaker in your territory may be open. Your inquiry will be held confidential.

The Studebaker Corporation of America
South Bend, Indiana

T H I S I S A S T U D E B A K E R Y E A R



The Country Has Gone Nash!—and Ajax!!

April! 20th Straight Month of Nash Record-Breaking Sales

April tallied the *20th consecutive month* that Nash sales and production have over-topped the high mark set by the corresponding month of the previous year.

—with the single exception of November, 1925, when production was arbitrarily halted to bring into manufacture the new “Enclosed Car” Motor.

The rapidly rising buying demand for Nash models that is sweeping the whole country hurried April sales and production far past the record figure of April, 1925.

And with Ajax sales and production included the increase was even more phenomenal.

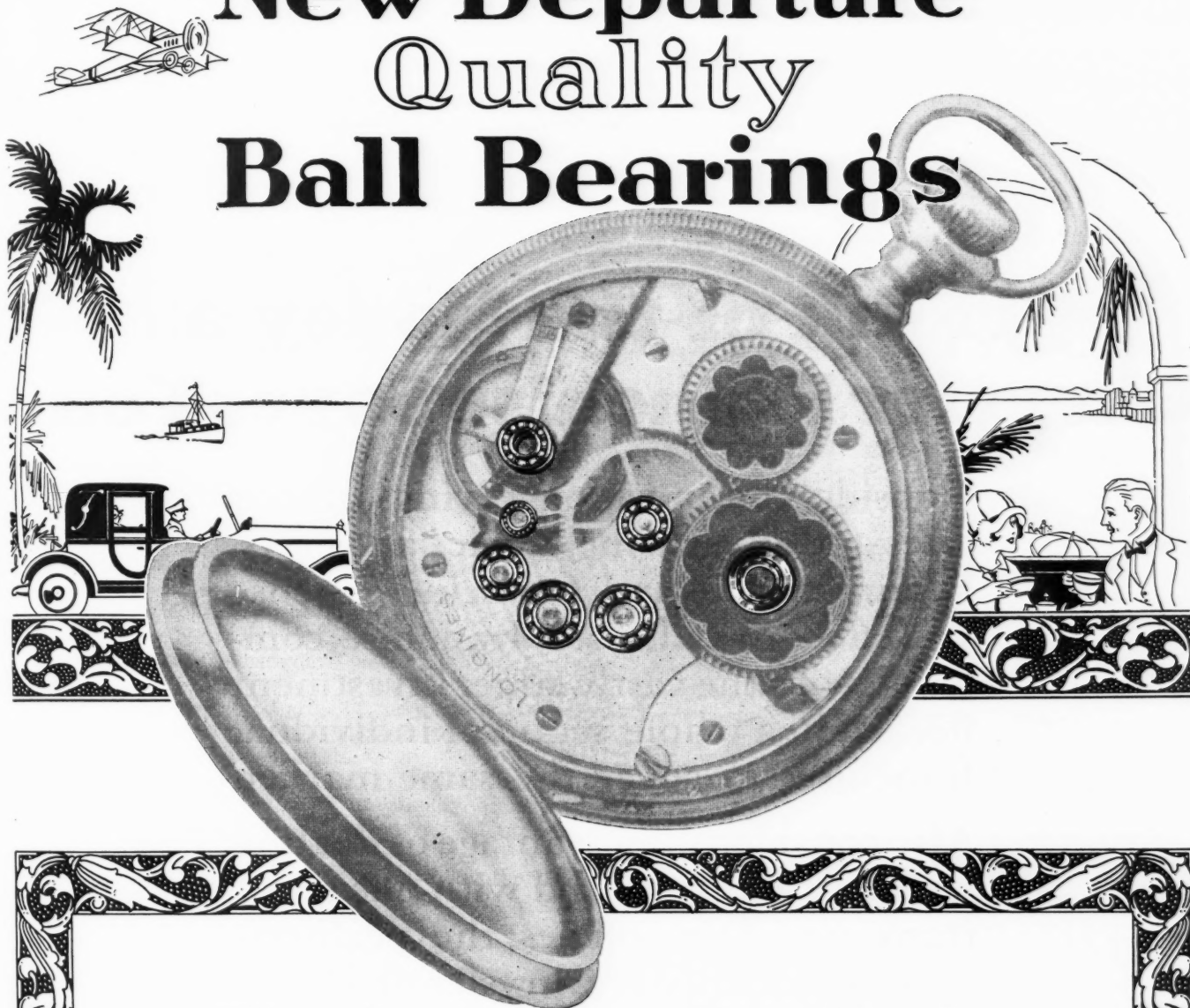
And it's all because the American public knows Nash offers greater QUALITY, greater VALUE, and far finer PERFORMANCE.

NASH

(3540)

Leads the World in Motor Car Value

New Departure Quality Ball Bearings



What Jewels Are to Your Watch New Departures Are to Your Motor Car

BOTH represent the result of highly specialized engineering knowledge, skilled workmanship, and selection of best materials known for the purpose.

Both reduce friction and wear to the vanishing point.

In one case are used precious stones for hardness and resistance to wear; in the other special electric furnace high carbon chrome alloy steels—the very last word in wear-resisting bearing metal.

And in design too. You will find no provision for taking up wear in a jewel. Instead, wear is prevented by design. So in New Departure, nothing rolls so easily, so free from friction and wear, and so true as a ball; so true, in fact, that it revolves under load about its true axis without guidance by the separator or other artificial means. This is accomplished in no other bearing type and explains why the ball bearing has so much longer life.

THE NEW DEPARTURE MANUFACTURING COMPANY
Detroit BRISTOL, CONNECTICUT Chicago



Think of the Money a Chrysler Franchise Saves You!

Consider the enormous savings in your sales and advertising, service and parts, administrative and financing expense you effect in a Chrysler franchise, compared with the vastly larger investment needed in a whole group of individual franchises to cover the same market.

Also consider the advantage of dealing with one company and with one set of frank and fair policies; the performance and quality of Chrysler products; and Chrysler's ever growing sales success which sweeps its dealers to new retail delivery peaks and profits—profits in which you still can share.

Then write or wire for further details. Your inquiry will be held strictly confidential.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.

CHRYSLER

C H I C A G O , M A Y 6 , 1 9 2 6 .

The Best Years Are Ahead

*It Is a Wise Merchant Who Today Plans to Have a Share in Supplying
The Vast Automotive Market of the Future*

By SAM SHELTON

THE automotive merchant who is worth his salt is looking beyond tomorrow's business.

The dimes he rings up on his cash register today will be dollars in the future not so far distant.

This great industry of ours is only fairly started on its course of dazzling business development. This is the most virile and progressive business in the world. It is bound to grow. It cannot stand still. It may suffer temporary setbacks, but over a period of years its forward progress will continue at a marvelous rate.

There are many reasons for this inevitable progress.

The automobile is the most universally desired commodity in America, exclusive of necessary food and shelter. But mere possession does not satisfy the desire. Complete satisfaction comes only from use. In other words, the desire is not much for the vehicle itself as for the useful transportation the vehicle will give.

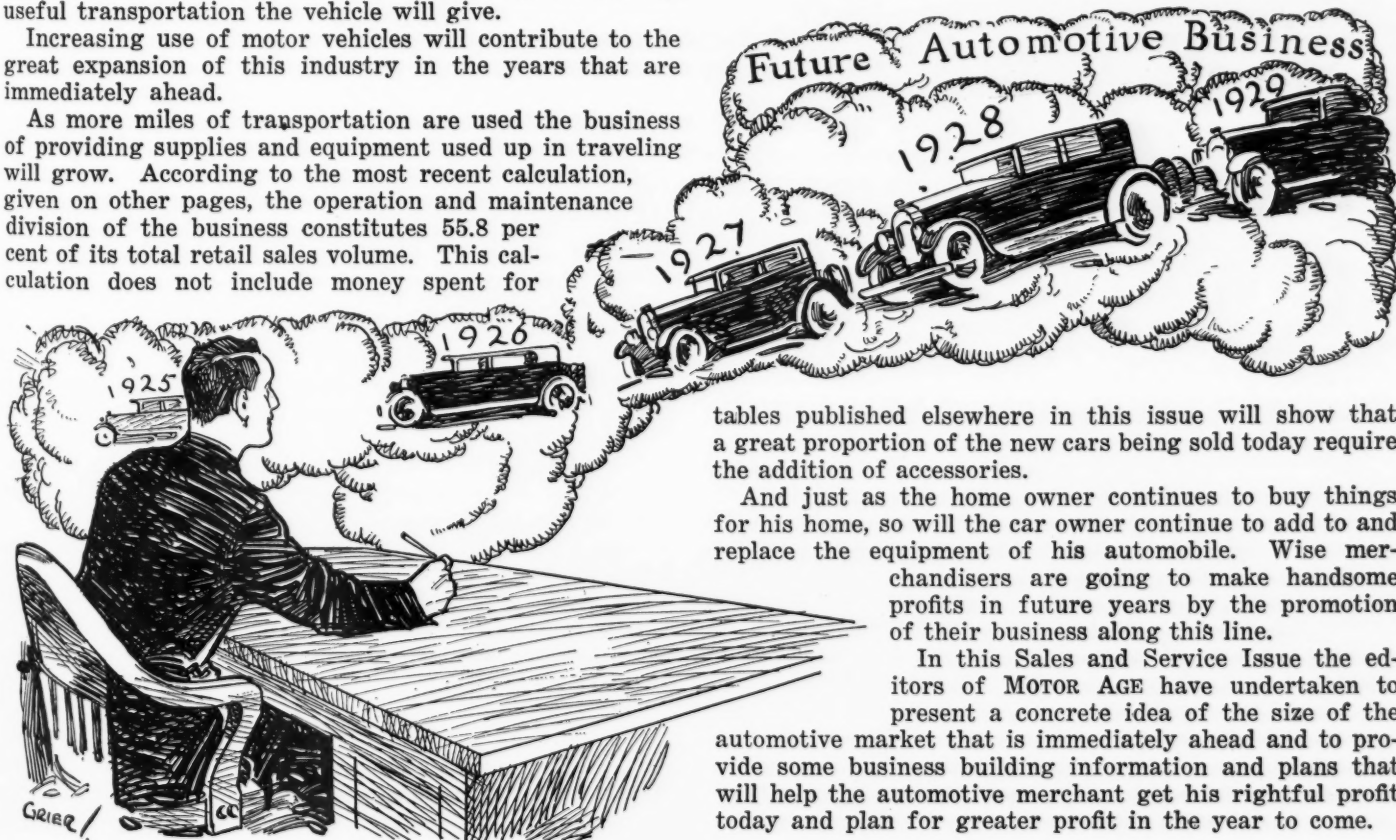
Increasing use of motor vehicles will contribute to the great expansion of this industry in the years that are immediately ahead.

As more miles of transportation are used the business of providing supplies and equipment used up in traveling will grow. According to the most recent calculation, given on other pages, the operation and maintenance division of the business constitutes 55.8 per cent of its total retail sales volume. This calculation does not include money spent for

service labor, and it may safely be assumed that the proportion of expenditures for operation and maintenance will increase from year to year. Hence it is a wise merchant who today recognizes the value of this market and plans to have a share tomorrow and next year in filling it.

A development of great consequence to the automotive merchant is the growth of passenger and merchandise transportation by bus and truck. This part of the business is only in its infancy and in the years to come its volume in the purchase of merchandise and maintenance service will reach staggering proportions.

The accessory field will continue to offer a profitable opportunity to the dealer. It is true many cars are equipped at the factory with devices that formerly were put on only by the purchaser. But examination of the



tables published elsewhere in this issue will show that a great proportion of the new cars being sold today require the addition of accessories.

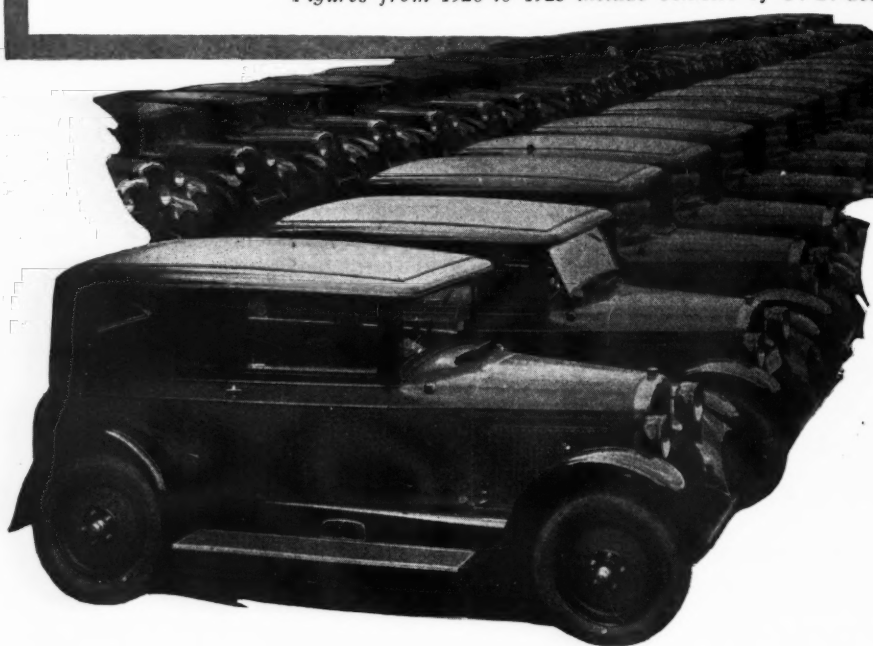
And just as the home owner continues to buy things for his home, so will the car owner continue to add to and replace the equipment of his automobile. Wise merchandisers are going to make handsome profits in future years by the promotion of their business along this line.

In this Sales and Service Issue the editors of MOTOR AGE have undertaken to present a concrete idea of the size of the automotive market that is immediately ahead and to provide some business building information and plans that will help the automotive merchant get his rightful profit today and plan for greater profit in the year to come.

Upward Progress of Production and Registration of Motor Vehicles in U. S.

Year 1913	Production	Per Cent Gain Over Preceding Year	Registration	Per Cent Gain Over Preceding Year
1913	485,000	28	1,258,062	33
1914	569,054	18	1,768,963	41
1915	892,618	57	2,494,912	41
1916	1,617,708	81	3,584,567	43.6
1917	1,868,949	15	4,970,671	38.5
1918	1,153,638	-38	6,105,588	23
1919	1,974,016	71	7,596,503	24
1920	2,205,197	12	9,206,141	21
1921	1,661,550	-25	10,505,630	14
1922	2,659,064	60	12,299,770	17
1923	4,086,997	53	15,312,658	24
1924	3,617,602	-11	17,605,495	15
1925	4,314,636	19	19,843,936	12.7

Figures from 1920 to 1925 include vehicles of U. S. design made in Canada.



More Cars

*Present Registration of App
Vehicles Creates Market for
tomotive Products—55.8 Per
Maint*

By SAM

THE growing tide of motor vehicle registration in the United States means more than mere numbers. It reveals a rapidly multiplying market for vast quantities of equipment and supplies, in addition to establishing a higher and higher quota for replacement vehicles to be made and sold each year.

In 1925 there were 19,843,936 passenger cars, trucks and buses registered in the 48 states and the District of Columbia, according to the survey made by Automotive Industries. This was an increase of 2,234,441 over the number for 1924, or a gain of 12.7 per cent.

American production of motor vehicles, as is well known, surpassed the output of any other year, reaching the grand total of 4,314,636 vehicles from plants in the United States and Canada. The total Canadian output, however, was only 161,386, leaving a total of 4,153,250 vehicles manufactured in the United States. Of this domestic production, 302,937 vehicles were exported, leaving 3,850,313 for the domestic market. This total for the domestic market was made up of 3,434,026 passenger cars and 416,287 trucks and buses.

Early in this year the total number of passenger car dealers in the United States was 48,544. Taking for granted that practically this same number were in business in 1925, the average number of passenger cars manu-

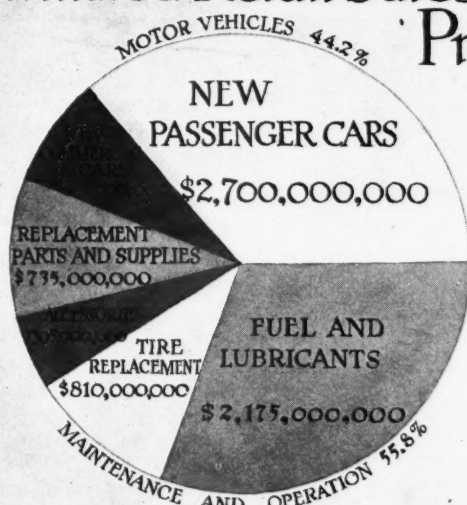
factured per dealer in 1925 was 70.7. In other words, the average dealer in 1925, all sharing alike, would have been expected to sell about 71 cars or approximately 6 a month.

But if he had been an average dealer his sales would not have run evenly at the rate of six a month. He would have started off rather lightly, selling only 5.6 per cent of his total, or 4 cars in January, increasing to 11.9 of his year's total, or 8.5 cars, in April, and dwindling off again to 5.3 per cent, or 3.8 cars, in December.

In order to have maintained sales at an even volume throughout the year he would have had to sell 8 1/3 per cent of his total year's business each month. Thus it is seen that with the greater proportion of closed cars being produced, better highways and better driving conditions sales are being maintained the year around on a basis that would have been considered remarkably equitable a few years ago, the spread actually being between 5.3 and 11.9 per cent.

This calculation is made on the basis of monthly new passenger car registration as published by the United States Department of Commerce. The new car registrations, of course, are not an exact index of current sales, but they are the only indicator available and certainly

Estimated Retail Sales of Automotive Products for 1926



Estimated Total 7,200,000,000



More Sales

roximately 20,000,000 Motor
\$7,200,000,000 Worth of Au-
Cent Goes for Operation and
enance

SHELTON

close enough to actual sales to be relied upon as a guide.

The following table shows the percentage of new car registration each month, according to the Department of Commerce report, and the corresponding number of new cars sales that our average dealer would have made each month on the basis of the registration figures:

Month	Per Cent Year's New Car Registrations	Average Dealer's New Car Sales
January	5.6 per cent	4.0 cars
February	5.4 per cent	3.6 cars
March	8.5 per cent	6.0 cars
April	11.9 per cent	8.5 cars
May	11.5 per cent	8.2 cars
June	10.5 per cent	7.5 cars
July	10.9 per cent	7.8 cars
August	8.9 per cent	6.3 cars
September	6.5 per cent	4.6 cars
October	8.4 per cent	6.0 cars
November	6.6 per cent	4.7 cars
December	5.3 per cent	3.8 cars
Total	100.0 per cent	71.0 cars

It is unlikely that we will ever reach the point of uniform monthly sales the year around, but the closed car and other factors are causing the industry to approach that point closely enough that the manufacturing and stocking problems of the industry are greatly simplified.

Since 1919 production of closed cars has increased from 10.3 per cent of the total to 61.5 per cent of the total in 1925. Indications are that this year's production will run to closed cars in much greater proportion. General Motors output averaged 83 per cent closed cars for the first two months of this year as compared with 50.5 per cent for the corresponding months of 1925.

Cars selling for less than \$1000 constituted 73.2 per cent of the total production in 1925, and the average retail price of all cars produced was \$870. This compares with an average retail price of \$824 in 1924 when 73.3 per cent of the production sold for less than \$1000. The largest proportion of production selling for less than \$1000, however, was in 1923 when this class constituted 81.6 per cent of the total output.

The increase in average retail price no doubt is due largely to the greater proportion of closed cars. It also is affected by the reduction in percentage of total output now made up by Fords—a factor which also is largely responsible for the smaller percentage of production selling for less than \$1,000. Ford production constituted only about 40 per cent of the total in 1925 as compared with approximately 50 per cent in 1924 and as high as 60 per cent in 1921.

In total registration first place went to New York state

May 6, 1926

SALES AND SERVICE REFERENCE NUMBER

11

MORE CARS—MORE SALES

in 1925 with 1,613,141 cars and trucks. California was second with 1,439,463, Pennsylvania third, Ohio fourth and Illinois fifth.

In ratio of motor vehicles to population California led with one vehicle for every 2.8 persons. The average for the United States was one motor vehicle for every 5.7 persons. The state with fewest vehicles in proportion to population was Alabama with one vehicle for every 12.7 persons.

The greatest gain in registration during the year was made by Florida with an increase of 34.3 per cent. The average for the United States was 12.7 per cent.

Increasing registrations mean two things:

First, more cars will be needed each year to replace those being worn out, and

Second, the sales of supplies, maintenance and accessories should increase in proportion to the growth in total registrations. For instance, in Florida with an increase of 34 per cent in registrations there should be an equivalent increase in the volume of supplies, accessories and maintenance sold. Similar ratios for all states are shown in an accompanying table.

Actually, however, the increase in sales of supplies, accessories and maintenance should be in an even greater ratio than registration gain in those states in which progress is being made in the construction of hard surfaced highways. Tables in another part of this issue show the progress of the various states in this respect. Good highways mean more use of automobiles and more money spent in operation.

There recently came to our attention a jobber who has doubled his orders for luggage carriers this year as compared with last year. He operates in Illinois where the increase in registration was 12.4 per cent. He took this increase into consideration, but in order to sell the greater part of his doubled volume he is counting on the greater tendency of car owners to go away for week-end and vacation tours in a state where good roads are being built rapidly.

The registration and production statistics of 1925 are presented here in the belief that the progressive automotive merchant will want to refer to them frequently in planning his business this year. He will want to know how his state stands so that he may properly plan his sales campaign. If his state is one of those having a large ratio of cars to population he knows he will have to sell most of his cars to persons already owning cars, but he has the additional satisfaction of knowing that his market for supplies and accessories is multiplied many fold. There were approximately 1,511,000 passenger cars scrapped in the United States in 1925. Some of these came from every village and community in the land. The passing of these vehicles created a market for a considerable proportion of the three and a half million new passenger cars sold.

The rising tide of registrations has created a market for approximately \$7,200,000,000 of automotive products

Registration Statistics As of Jan. 1, 1926

	Motor Vehicles	Percentage Increase Over Jan. 1, '25	No. Persons per Motor Vehicle
Alabama	194,580	23.7	12.7
Arizona	68,029	17.7	6.0
Arkansas	183,764	29.4	10.1
California	1,439,463	8.9	2.8
Colorado	226,118	6.0	4.5
Connecticut	248,474	15.9	6.2
Delaware	40,681	15.8	5.8
District of Col.	93,612	16.0	5.3
Florida	260,720	34.3	4.9
Georgia	244,871	17.0	12.5
Idaho	81,484	17.7	6.0
Illinois	1,263,177	12.4	5.5
Indiana	725,410	11.6	4.2
Iowa	657,567	5.9	3.8
Kansas	457,033	11.2	4.0
Kentucky	260,754	12.5	9.5
Louisiana	207,000	16.3	9.1
Maine	140,134	10.2	5.6
Maryland	230,684	18.0	6.7
Massachusetts	654,338	14.4	6.4
Michigan	990,709	14.1	4.2
Minnesota	569,634	13.3	4.5
Mississippi	177,262	31.8	10.1
Missouri	602,900	10.7	5.7
Montana	94,656	18.8	6.8
Nebraska	338,718	9.7	4.0
Nevada	21,185	15.2	3.7
New Hampshire	81,250	13.0	5.5
New Jersey	579,886	15.0	6.1
New Mexico	49,101	17.6	7.7
New York	1,613,141	14.3	6.9
North Carolina	351,767	15.1	7.9
North Dakota	144,956	23.8	4.7
Ohio	1,305,000	4.9	4.8
Oklahoma	438,000	27.7	5.1
Oregon	216,324	12.3	4.1
Pennsylvania	1,317,053	7.2	7.1
Rhode Island	102,476	13.0	6.6
South Carolina	170,658	4.5	10.4
South Dakota	168,118	18.2	4.1
Tennessee	248,021	21.1	9.8
Texas	968,406	16.1	5.3
Utah	72,490	4.7	6.8
Vermont	69,576	13.7	5.1
Virginia	281,100	7.4	8.7
Washington	332,442	12.8	4.4
West Virginia	217,069	14.2	7.4
Wisconsin	596,373	13.5	4.7
Wyoming	47,712	9.3	4.6
Total	19,843,936	For U.S. 12.7	Av. 5.7

in 1926. It is estimated that sales this year will be about as follows:

New passenger cars.....	\$2,700,000,000
Fuel and lubricants.....	2,175,000,000
Replacement tires	810,000,000
Accessories	305,000,000
Repair parts and supplies.....	735,000,000
New commercial cars.....	475,000,000

Total\$7,200,000,000

In addition to this there will be a sale of labor surpassing the volume of parts and supplies sold, or in the neighborhood of \$1,000,000,000.

In the field of merchandise alone sales for maintenance and operation will constitute about 55.8 per cent of the total volume, or \$4,025,000,000. In comparison new car and truck sales will constitute about 44.2 per cent of the total volume, or \$3,175,000,000.

On this basis the sale of accessories, parts, supplies,

(Continued on page 68)

New Car Sales by Months in 1925

JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5.6%	5.4%	8.5%	11.9%	11.5%	10.5%	10.9%	8.9%	6.5%	8.4%	6.6%	5.3%

This chart, based on figures published by the Department of Commerce, shows how the total number of new cars registered in the United States in 1925 was distributed by months, in percentages. The total new cars for the year equal 100 per cent



The Cahuenga Pass Road near Los Angeles. This wonderful highway is 40 feet wide and is to be broadened to 72 feet

The Big Road—1926 Model

*How America Is Building Highways to
Take Care of and Provide for Rapidly
Expanding Automotive Transportation*

By M. WARREN BAKER

GEORGE consulted the big black book that lay on the seat beside him.

"This ought to be the cross-roads," he decided, after looking at the speedometer. "It says here that you travel the Lincoln Highway 57 miles from Milltown, then turn south at the cross-roads to Centerville. This sure is a lot better'n gettin' your information from some farmer who doesn't know any directions but 'that way' and 'yonder'."

How many more Georges are consulting their road maps and following explicit directions to the letter, do you suppose? There are very few tourists who do not remember the day they were told to travel "the big road down three section lines, then turn to the left at the next cross-road." Maybe the cross-roads were there when they arrived and

maybe they were not, but in either case the one who did the directing cared little.

It has not been long since it was almost impossible to make a transcontinental trip by automobile without getting lost in some mountain range, desert or prairie and wind up the tour two or three weeks later than anticipated.

At the present time, all that is needed is a good road map, a speedometer that tells the truth, and some ability to follow directions.

All this has come with the development of the automobile industry, and has come largely through the demand of the motorists of the country. There never was any work done that was not demanded, and the American motorist has put up such a yell for decent highways to

May 6, 1926

SALES AND SERVICE REFERENCE NUMBER



View of famous Boston Post Road recently widened to take care of rapidly increasing motor vehicle traffic

drive upon, that there is not a state in the Union that has not made some effort to ameliorate the situation.

Highways now are being built with the idea in mind that they will be used by people who never saw them before, and probably never will again. Heretofore they were built for the native son only, and only a native son could have found his way around on most of them.

This highway progress has been one of the principal factors in the development of the motor car industry.

Better highways meant greater facilities for touring and high speed transportation in the conduct of business. This resulted in a great demand for automobiles. When more automobiles were on the highways, the public demanded more road space. And so on "and the end is not yet."

It is useless to attempt a prediction as to where it will lead, but the highway builders are making great strides in their efforts to catch up with the public.

Highway Space Imperative

Sufficient highway space is an absolute requisite to capacity automobile business near the congested centers. This is axiomatic. Space is not so necessary as fitness in the sections of the country where there is less population. However, even in these sections, with the population increasing materially every year, it will not be long before space also will become a requisite.

Few cars are sold in country districts where the roads are shifty in the summer and without bottom in the rainy season. It is easy to understand why. The best car or truck ever built will not travel through mud hub deep and stand up for the number of miles it is supposed to run. There is little pleasure or economy in driving over roads in which are great chuck holes.

Cars will sell better when they will do the work they are expected to do, and they cannot do the proper work until they have decent highways to run upon. A locomotive

is not expected to run upon a concrete highway. Neither should an automobile be expected to run on a corduroy road.

Dealers in such districts should take cognizance of the facts and boost better roads instead of sitting back and cursing the hail that flattened the farmer's wheat crop or the drought that withered his corn.

Overcoming Sales Resistance

The automobile men as well as the public have taken more interest in the highway problem in and near the great cities than in the rural sections. They have boosted more and better highways, because it was almost impossible to get to, or away from the business districts of almost any of the great cities, or to park there if they were fortunate enough to arrive. This made it harder to sell cars, for the prospect put up a perfectly sane argument that a car he could not use with pleasure or to advantage was of little worth.

City dealers have partially succeeded in overcoming the arguments of the prospect by boosting, through their associations, for super highways and more street surface within the city and their boosts are beginning to be felt in many cities of the country.

The rural dealer, with some outstanding exceptions, has not been so active. He has given subscriptions to organizers of road systems and passively waited for developments. Developments do not develop by waiting passively, and dealers have discovered that they must sell many more cars in this day and age than they were accustomed to selling in the past. One of the finest, easiest and least costly ways to sell more cars, is not only to boost more and better highways, but also to see to it that they are built.

There is not a dealer in the country today who would not see an increase in his business the first year that he gets improved roads. By the end of the second year,



Above: The super-highway between Detroit and Pontiac. Photograph shows how four lanes of cars, two in each direction, are accommodated. When completed a second roadway of equal width, 44 feet, will parallel this on the opposite side of the electric railway tracks. Circle: Luxurious motor coaches are now maintaining regular schedules between distant cities. This one runs between Kansas City and Denver.

the increase would be marked. The public needs the cars, but it must have roads to run them on. The dealer who boosts roads not only is boosting his own business, but it also getting the satisfaction of riding on the bandwagon with the general public in a good cause. He will gain more friends and greater prestige, and that's what builds business.

It was not necessary for the automobile dealer of a few years ago to worry about roads. He did not have to worry about much else for that matter. He could sell all the cars he could deliver and if he ran his establishment in any sort of business-like manner, he made money.

Competition between manufacturers now has been passed on to the dealer. Nowadays, it is the dealer's battle. The manufacturer makes the cars and the dealer lies awake nights figuring out ways to beat his competitor to a prospect. It is for this reason that the dealer should seriously consider the subject of highways.

He realizes fully that the subjects of automobiles and roads are so closely connected that the thought of one always conjures up the other. It has been the case, however, that most dealers have immediately put the thought of highways out of their minds when it came up, with the mental excuse that "I haven't time," or "I'll take some action tomorrow."

The dealer has time to figure out new finance plans, new display arrangements, new advertising copy and the myriad other activities that enter into his daily life. He should take time to consider highways.

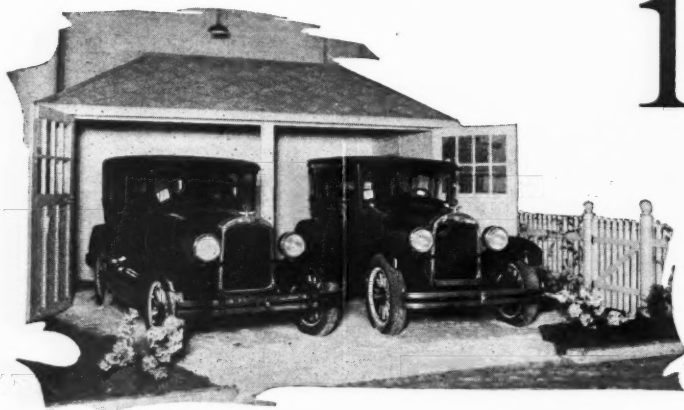
Very few dealers expect to be here today and gone tomorrow. If the dealer is making plans for a year ahead, as he should be, he should also be considering his potential market. As far as the number of people and their earning power is concerned, his market is not limited, but from the standpoint of roads to run his automobiles upon, it is. A state of near-saturation is with us in the matter of highways, and, although it is realized, the automotive industry is doing little to remedy it.

Once more, it is the car-owning public that is kicking. It will continue to kick until its wants are satisfied. As soon as its demands are fulfilled, it stops kicking. Then where does the automotive industry get off? There may be roads enough by that time to care for the existing number of automobiles, but what about the potential market? It will be exactly where it stands at present, in a state of near-saturation if not actual.

The automobile industry should get behind the demands of the public but not stop where the public does. It should demand more than enough highways for the present need in order to provide for its future activity.

Statistics compiled by Automotive Industries show that fuel and lubricants in connection with maintenance and operation will average about \$201 for every motor vehicle in operation. In 1925 total maintenance labor sales were approximately \$963-635,000, or approximately \$48 for each motor vehicle registered. Thus an average expenditure of approximately \$250 a year for operation and maintenance of every motor vehicle is required. The dealer knowing the number of vehicles in his own community can easily figure the potential market that he and his various competitors will have to divide this year. And

(Continued on page 32)



New cars displayed in service department. Illustrating plan No. 1

101 Money

25 New Car Selling Ideas on These Two Pages

(See following pages for Used Cars, Accessories and Service)

This Distributor Has New Car Displays in Service Station

1. Progressive automobile dealers know that good service sells cars, indirectly, due to the good will created. The Gambill Motor Co., distributors for Hupmobile, in Chicago, goes a step farther, for it shows to every car owner entering the service department just how his own back yard would look with a new car or two in an attractive garage. The garage, itself, is there with doors thrown wide to reveal two spick and span new Hupps. This presents the new car idea to the man driving an old model into the service department.

How Dealer Uses Sale to Develop Leads to Sell Others

2. A direct mail system used by the Emblem Motor Company, San Antonio, has been beneficial in new car selling. The company keeps up a mailing list of all owners in its price field. Then, upon selling a new car, it sends letters to such owners living near the home of the latest buyer, suggesting that they look over the new car. The letter stresses good points of the car sold and where a used car was taken in, it tells what model it was and invites the recipient to bring around his old car if he is thinking of trading in for a new one.

Salesmen Have Signs in Front of Their Homes

3. Salesmen for the Weisman Motor Sales Company, Chevrolet dealer, in Detroit, place neat signs in front of their homes. This sign lets the public know of the business of the man dwelling within, just like the doctor accomplishes the same end with a name plate.

Hotel Display Proves Profitable in Small City

4. Hotel displays for the purpose of selling new cars are common in New York and Chicago at show time and the fact that they may be successfully used in smaller cities is attested by the Grand Rapids Flint Co., Grand Rapids, Mich. During the period of the automobile show in Grand Rapids this spring the Grand Rapids Flint Co. conducted a display in the lobby of the beautiful Morton Hotel which resulted in the sale of 41 new cars for a total sum of \$81,600. C. W. Calder, manager of the company, states that it was the first hotel exhibit ever held in Grand Rapids.

Dealer Appeals to Parents Through Contest for Children

5. Create parental interest through the children. That is the thought behind a contest plan used by the Towell Cadillac Co., Akron, O. The contest is open to boys and girls of high school age and requires answers to automotive questions appearing in newspapers. Help in answering questions can be obtained from the Cadillac dealers' information service while more help can be obtained from Cadillac owners. Prizes go to those offering the most meritorious answers. Naturally the "old folks" help the contestants and many families talk "Cadillac."

"Driving School" for Women Spreads the Nash Merchandising Message

6. The Nash-McLarty Motor Co., of Dallas, Nash and Ajax dealers, has made successful use of a "woman's driving school." Women who enroll to learn driving are taught the art with dual controlled stock cars at no charge, more than 400 having taken the instruction in the past year. The pupil does not have to be a prospective buyer, but she must give her name and names of father, brother and other relatives.

Salesmen Take Turns About Acting as Salesmanagers

7. The J. E. Price Motor Company, Ford dealer at 1312-18 South Grand Boulevard, St. Louis, has its own way of developing efficiency in the sales organization. This is a company which has no permanent sales manager. Each salesman takes a daily turn at directing the force and in this manner the organization profits through a variety of merchandising conceptions much of which, under the conventional system, would not be put to test.

Gives Salesmen 28 Sample Letters to Use in Writing Prospects

8. Nash Levy Motors, Kansas City, Mo., gets fine results with letters. J. W. Clower, vice president, prepared 28 sample letters bound in book form which the salesmen use systematically. About once a week, usually on floor days, the salesman selects a large list of prospects and letters to suit each case. Then he hands his list, designating letters to be written, to a stenographer who prepares the letters for his signature. The system is said to have proven highly valuable.

Quotes Local Authorities in Newspaper Advertising

9. An impressive example of motor car advertising was used in Milwaukee papers by the John Wol-laeger Co., Studebaker distributors in Wisconsin. The ad quoted 15 well known Milwaukee manufacturers and business men as to their opinions concerning materials, parts and equipment entering into Studebaker construction. The man quoted was selected for his authority to speak. For instance, one quotation was from an expert in leather, another from an expert in glass and so on.

Names of New Car Buyers Published in Local Newspapers

10. Why not see if your local newspaper will not publish lists of new automobile buyers—as news? It is news, if you can sell the paper the idea. Friends are as much interested in that as new babies, bridge parties, real estate purchases and countless other items accepted as news. Hand that argument to the newspaper. George Dunton, Ford dealer in Santa Ana, Cal., convinced a live editor that his list of new owners is good news and this list appears every two weeks—free.

Covers Walls With Cards Bearing Owners' Names

11. One of the first things to attract the attention of the visitor at the show room of the Dodge Brothers agency at 319 North Vermillion Street, Danville, Ill., is an arrangement of owners' names printed in large letters on cardboard and thumb-tacked to the walls. The new car prospect is bound to see the names of many of his friends and acquaintances in this list and he naturally is struck with the daring of the dealer in adopting such a scheme.

This Dealer Puts Local Color in His Newspaper Ads

12. Bert Bingham, dealer in Willys-Knights and Overlands in Pomona, California, has employed an advertising stunt that has yielded very pleasing results. The idea is to tie up some interesting local event or matter of local interest with the company's advertising. As an example—one of the advertisements quoted part of a letter from a prominent Pomona citizen who was touring the Holy Land in a Willys-Knight. It was an item of real news to all Pomona residents and all reading it unconsciously had their minds turned upon the cars that this dealer sells.

Making Plans

A Clever Way of Advertising the Car Sold by This Dealer

13. The Walter B. Zimmerman Co., 522 East Broad St., Columbus, O., distributor for Hudson and Essex, has been advertising Essex in an original manner, shown in the illustration at right. The novel machine is a standard Essex chassis with the exception of special white vitrolite finish and extended steering apparatus and controls, which were designed and built in the company's shop. The extensions are cleverly concealed by the driver's costume.

Beautiful Woman in Nifty New Stutz Features Company's Publicity Stunt

14. An exceptionally attractive young woman slowly driving a brand new and also exceptionally attractive touring car of Stutz design caused necks to stretch and eyes to open wide each afternoon for a number of days in Dallas. Traffic jams apparently didn't worry her. In fact, she seemed to like situations calling on her car for fine and easy performance. The frequency of her appearances caused a lot of comment and inquiries at the salesrooms of the North Texas Stutz Co.

Winter Drive for Immediate Delivery Brought Sales

15. One of the three divisional prizes to sales managers in the Willys-Overland "Derby" contest in the latter part of last year went to E. P. Olson, sales manager of the Transport Motor Company, Spokane, Wash. Thorough organization for the effort, house-to-house calls, call-backs on all prospects and hard-hitting tactics contributed to the winter sales record.

Dull Season Used for House to House Canvas

16. Jim Hariff for several years has been the salesman ace of the Jamieson Auto Sales Co., Chevrolet dealers at Canton, O. One contributing element in his high batting average is a self-assigned job for dull seasons. This is a systematic house-to-house hunt for prospect material, resulting both in "dull season" sales and many live prospects for more active times.

Set of Dishes as Premium Helps New Car Sales

17. Few things in the way of premiums appeal to the housewife as much as a nice set of dishes and on a number of occasions automobile dealers have used this special inducement to speed up the sale of new cars. A. C. Stevens, manager of the Portland Motor Car Company, Portland, Ore., Hudson-Essex dealers, made use of dishes to drive "home" the new car selling argument. The premium offer features a "42-piece set of the finest English clay."

Testimonials From Owners Are Used Effectively

18. Testimonials are valuable only in accordance with the manner used. But testimonials from car owners can be made dignified and ap-

pealing. The trick of presenting them in this fashion has been learned by the L. H. Motor Co., Hupmobile dealer, Hartford, Conn. Appearing on an artistic folder and surmounted by a large cut of the Hupmobile 8 Sedan, the testimonials reproduce the owner's handwriting and are over his own signature. At the side of each is a picture of the owner.

Service is Emphasized by Dealer to Sell New Cars

19. There's a magnificent building in Charlotte, N. C., owned by C. C. Coddington, Inc., dealer in Buick automobiles, and that building is called "the house that service built."

"Sell service"—that's the motto of this corporation, Coddington salesmen tell the prospect all about Coddington's service before they go into details about the Buick car further than is absolutely necessary. They hammer, verbally, on 24-hour, seven-day service, an organization that quickly completes the service job, and an inspection service that is intended to minimize trouble.

Boy Towed a Star With His Fish Line to Show "Easy Rolling"

20. The R. T. Mitchell Co., Star dealer at Ogden, Utah, recently got a good reaction through a novel street demonstration. A small boy towed a Star car with a fish line for three blocks along a principal business street. The demonstration was to show the "Easy Rolling of the Star."

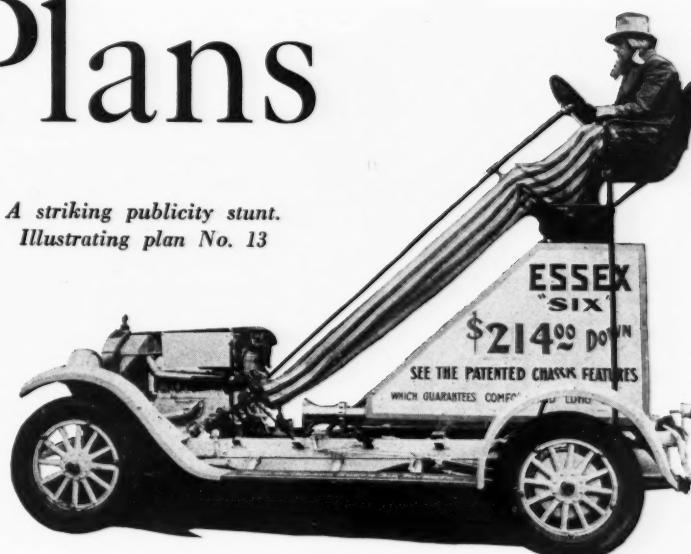
Gives Parade of Owners on His Business Birthday

21. Department stores make considerable capital of their birthday celebrations—so why not the automotive merchant? James C. Howard, Ford dealer in La Habra, Cal., once asked himself the foregoing question, then answered by following the department store plan. Each year on June 9, the anniversary of his start in business, he holds a celebration. It is preceded with much advertising. All Ford owners in the community are especially invited and guests at the store are asked to register. The celebration features many special stunts, including a parade of Fords.

Insists on Demonstrating New Car Before Appraising Used One

22. One of the problems of the automobile dealer in a center where there is considerable competition is that of disposing of the "shopper" as economically as possible. F. D. Cerf, president of the Stutz Chicago Factory Branch, Inc., instituted a

A striking publicity stunt. Illustrating plan No. 13



policy which largely eliminates the simon-pure "shopper." The plan is to make no offer on the old car until after a demonstration.

Special Offer of Trip to Factory for Buyers Was Effective

23. Nearly any car owner would like to see the inside of an automobile factory.

The Dunkel McVey Company, Buick dealer, Canton, Ohio, used this inducement in the promotion of March and April sales. All prospects were told a purchase would entitle them to this trip to Flint, Mich., where they could see how Buicks are manufactured. On April 13 a party of 50 contracted buyers made the journey.

Silent Demonstration is This Dealer's Selling Plan

24. Herbert R. Bernhardt of Bernhardt Motors, Inc., Moon and Diana distributor in Buffalo, believes in what he terms the Silent Demonstration.

"When I am doing the demonstrating," said Mr. Bernhardt, "I take the man in the car first along a street where the pavement is rough to show him how smoothly it runs on going that is not good. Then I turn onto a smooth pavement and show how efficiently and quickly its brakes operate, how remarkably it picks up, etc. Then back to the salesroom. All this time I do not talk about anything if I can help it. This silence causes him to concentrate on the car. When we get back to the salesroom I always let him break the silence. He is forced by circumstances to say something which usually is about the car. Then he has given me an opening."

Pays Office and Shop Employees for Names of Prospects Who Buy

25. Stratton-Bliss Co., Oakland and Pontiac dealer in New York City, decided that not only its salesmen but also every employee in other departments should be interested in helping sell Oakland and Pontiac cars. Accordingly a little booklet was made up containing 10 cards to be used in reporting names and addresses of prospects. Employees furnishing names of prospects were paid \$10 for each new car sale and \$5 for each used car sale.



Attractive Used Car Display Helps Make Sales for Burwell-Harris Co. Illustrating Plan No. 50

Attractive Layout for Open Air Display of Dealer's Used Car Stock

26. Many dealers in used cars have discovered that cars displayed in the open will attract a certain element of the buying public where an inside display would not.

Motor Age offers the attractive layout shown on the opposite page as a suggestion to dealers doing business in this way. The office is in the form of a small cottage with peaked roof and casement windows and the fence may be constructed very cheaply of rough lumber stained. The fence posts are square and the pickets are one inch stuff of irregular width, each having a little sawed out square or other design at the top.

The lamp posts are not solid but built up of boards so that wires may be inserted and they are connected by conduit underground as indicated by the dotted line with switch inside the office. Ornamental lanterns or globes are suspended from the cross-arms.

If there are objectionable surroundings the fence at the back may be 8 or 10 ft. high.

Free Rides in Airplane Work Down Used Car Stock for Jack Neal

27. The Jack Neal Nash Company, San Antonio, Texas, is noted for its originality in merchandising. Among the unusual used car selling stunts tried successfully by Griffin Vance, Jack Neal's used car manager, was the offer of a free ride in an airplane to each used car buyer. That offer was on for 10 days, sold 35 used cars and listed 70 prospects for new cars.

Canadian Dealer's Novel Advertisements Capitalize Humorous Quips

28. Newspapers of Ottawa, Canada, carry regularly a feature of humorous quips that interest and entertain many readers. The feature is an ad furnished by The Motor Co. Ltd., Studebaker dealers, presented in the form of a tabloid newspaper and is used by this organization in used car merchandising. The ad gives Bertram Lemlin, president of the company, a chance to demonstrate his exceptional skill as a paragrapher.

Campaigns at Gates of Factories Find Many Used Car Buyers.

29. The Oakland Motor Car Company, of Atlanta, Ga., has conducted a number of special used car selling campaigns at the gates of large industrial plants where employees pass on their way to and from work. The salesman assigned to the plant takes a used car with him for exhibition purposes and passes out pamphlets telling of the advantages of owning an automobile and listing used car prices.

Checks for Allowance on Old Car Bring Prospective Buyers to Store

30. Herbert S. Cox, Chandler distributor at St. Petersburg, Fla., has had considerable success with a "check system" in solving the used car problem and speeding up new car sales. Cars are appraised in the service department, on the street or any place they might be found. A form check then is filled out for the sum that will be allowed on a new car, "payable" at the company's place of business, is at the company's place of business.

Here's Where "Bargain Basement" Display Lures Used Car Prospects

31. The average used car shopper has a limited amount of money to spend for a motor vehicle and consequently many of the species find their way to the "bargain basement" of the Walter F. Wright Co., Chrysler distributor, in Cleveland, Ohio. This company makes use of its entire basement space for used car display.

He Knows How to Make Them Read His Ads in Classified Section

32. Hitting the classified columns in a manner to make the reader pay attention is a trick C. Jimmie McLeMore, of Dallas, Texas, knows well. On one occasion he offered Fords at \$10 down and 3 cents a day, Buicks at \$10 down and 11 cents a day, Cadillacs at \$10 down and 13 cents a day, etc. Later, fearing he had made his "wealthy prospects mad" by catering so much to poor people exclusively he offered his "rich friends" wholesale bargains—Fords, \$450 per dozen; Chevrolets, \$600 per dozen, etc.

25 Used Car Ideas on These

Used Cars Moved By Offer of Commission to all of Plant's Employees

33. The Detroit branch of Reo has a policy under which any employee is eligible to collect a commission of 5 per cent on the sale of a used car for which the employee is directly responsible.

Avoids Trade-in By Selling Farmer on Reconditioning and Delivery Body

34. In dealing with his rural customers Frank Wilson, Buick dealer in Vancouver, Wash., finds he often can sell a good maintenance job instead of having to take in a used car on a new one. He will explain to the farmer that he could not allow him much on the old car but that he could recondition it and put on a delivery body so it would be still of considerable service around the farm.

Stress Insurance Against Buyer's Illness in Their Sales Argument

35. The W. F. Groom Motor Corp., Buffalo, N. Y., moves used cars by placing special emphasis on insurance against the buyer's illness during the period of payment. The following appears conspicuously in some of its advertisements:

"Sickness Policy with every car protects your payments. Should you become ill or disabled, unable to meet your payments, our Special Insurance Policy, given with every car, will keep up your payments."

"Barrel of Free Gas" Sounds Good to Numbers of Used Car Prospects

36. Some of the old merchandising ideas are worth dusting off now and then and putting to work. The L. S. Harris Co., of Knoxville, Tenn., got good reaction with an offer of "fifty gallons of gasoline" free with each used car purchased. Another southern dealer offers "a whole barrel of gas."

Extra Equipment Has Strong Appeal and It Is all Included in Price

37. Equipment consisting of the following items is provided with every used car sold by the Drennen Motor Co., Birmingham, Ala.:

Jack and handle.
Tire pump.
Tool kit containing hammer, screw driver, monkey wrench and pliers.
Oil can on dash.
Set of side curtains.
The regular retail price of these items is added to the selling price of the car.

Unusually Worded Signs Put Over Sales for Buffalo Organization

38. THE GREATEST SALE SINCE THE ONE COLUMBUS TOOK. That was a sign stretched across the front of the salesroom of A. F. Winegar Corp., Auburn distributors in Buffalo. Under it, and painted on the show windows, were smaller signs, calling attention to used cars that the concern had for sale.

Selling Two Pages

(See following pages for
Accessories and Service)

Enlist Salesmen of Other Concerns in Merchandising Used Cars

39. Dallas Auto Sales Service of Buffalo successfully uses salesmen in other organizations in disposing of used cars.

"We buy only good serviceable machines," said one of its executives. "We send each machine we take in to the service station of the organization, handling that car in Buffalo, and have it put in A-1 shape mechanically and repainted. Then we sell it at a reasonable profit."

"We dispose of a number of machines through salesmen for various automobile dealers."

Large Spring Accumulations Obviated By Extra Winter Pressure

40. The Independent Motor Sales corporation at Paxton and Rankin, Ill., obviates spring used car accumulations and consequential losses in possible profits by intensifying its used car selling efforts through the late fall and winter. For instance, last November found this organization with a rather full stock of used cars but instead of waiting until early spring to make an eleventh hour drive this company got on the job in the winter.

Keep up Used Car Prospect List Same as File on New Car Leads

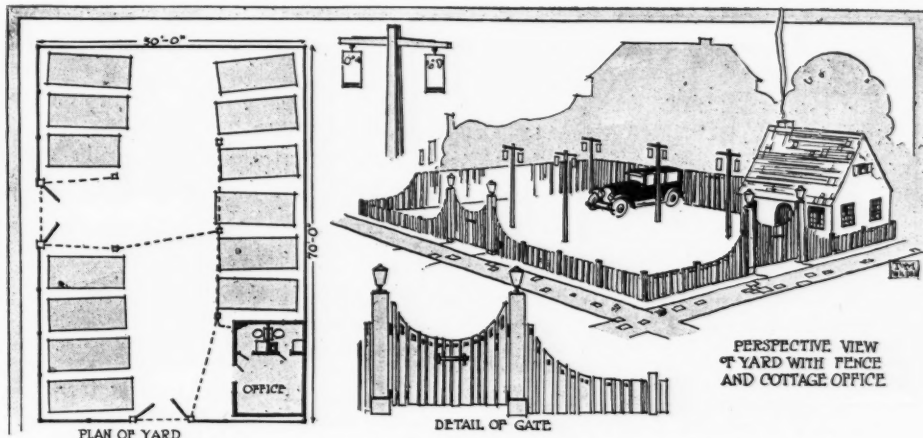
41. While all dealers maintain a new car prospect file in some form or other there are relatively few who give the used car prospect file the attention it deserves. A dealership which believes in thoroughness respecting the used car prospect list is that of Parrish & Reinagle, holding a Dodge Brothers franchise at Pontiac, Ill. In this establishment the used car prospect list is kept up with religious attention the same as the new car prospect file. Frequent letters are sent to used car prospects listing cars on hand.

Group Method of Selling Found Profitable By Eastern Company

42. Bernhardt Motors, Inc., Moon and Diana distributor in Buffalo, has found effective what is called the Group Method of selling used cars. It conducted a group sale last year and the year before, and is planning to have one this year. In these sales, the concern assembles its used automobiles in groups. In Group 1 are cars, to be sold from \$100 to \$250; in Group 2, from \$250 to \$400; and so on.

Monopoly of Entire Classified Page is Big Bet in Dealer's Clean-up

43. A classified page all to itself! That is one of the powerful devices used by the Overland Sales Company, of Jackson, Mich., in drawing



Design for Open Air Used Car Lot Drawn by Tom Wilder.
Illustrating Plan No. 26

the crowds to a big clean-up used car sale. It reserved an entire page in the Jackson Citizen-Patriot for its own use.

Pay for License and Give "\$10 Gas Book" as Special Sales Inducement

44. Offer to pay the buyer's license and "a \$10 gas book free" constituted a special inducement to either new or used car purchasers featured recently by Roy C. Bothwell, Chandler dealer at Salt Lake City, Utah.

Save Cars From Junk Loss By Going Stronger on the Advertising

45. Paige Sales Co., Paige and Jewett dealers, Buffalo, N. Y., by use of more than ordinary advertising display in such cases, sells at comparatively good prices, cars of a type that used to be turned over to the junk man. Such a car is fixed so it will run, slicked up some and put on the new car salesroom floor. Then an ad is run.

Follow Policy of Persistence to Learn Shopper's Name and Address

46. Sticktoitiveness is the secret of selling used cars. So Overland-Knight Co., Inc., distributor of Willys-Knight and Overland cars in Buffalo, N. Y., thinks. The first thing its salesmen do when a prospect calls, it to try to get his name. The salesman, approaching the prospect says: "Good afternoon, sir. My name is Blank." Then the salesman pauses to give the caller a chance to say who he is. If he neglects to do so, the salesman asks him his name. If he refuses to say, the number of his car, if he has come in one, is taken when he drives away. Before he gets home the company knows who he is. The Overland-Knight company sells on an average 30 used cars a week. It reconditions, retires and, if necessary, repaints every car.

Cold Cash Money Back Offer Wins Out for Large Nash Dealership

47. "Take a used car. Drive it three days. If you are not satisfied with it bring it back and get your money back." That is, in substance, the Gold Seal Contract offer that helps used car selling for the Nash Buffalo corporation, Buffalo, N. Y. The offer does not mean that the buyer gets his money back in the shape of a payment on another car he may select. He gets it back in cold cash unconditionally.

Full History of Car and Indemnity Bond Form Part of This Plan

48. Giving the used car buyer as complete a history as possible of the vehicle, plus an indemnity bond guaranteeing the accuracy of the information furnished, is the plan used by the Sands Motors Co., Studebaker dealer, Seattle, Wash., in handling its resale problem. The "Sands Plan" was designed to overcome the buyer's suspicions and goes the limit in its harmony with the Studebaker resale policy. All cars taken in are thoroughly reconditioned and all overhauling operations are listed and put in an envelope for the buyer. With this is information concerning the car's history, conditions under which it was used, etc., including a signed statement by the former owner bearing on the car's history—and the bond. On the back of the envelope is a guarantee of the contents by P. E. Sands, president of the company.

Calling it a "Re-Sale" Car Has a Somewhat Different Mental Appeal

49. That a "resale car" has a stronger appeal than "used car" apparently is the theory of the Rolls-Royce agency, 2512 South Michigan ave., Chicago. Along come these dealers with an ad in the rotogravure section of a Chicago Sunday paper offering second-hand vehicles to the public but avoiding the term "used car." They are all "resale cars." A difference in the mental appeal! The same thought is behind this idea as behind the "rebuilt car" and "reconditioned car" that numbers of dealers prefer to "used cars." Price class would not alter the theory.

Inviting Entrance to Used Car Lot Speeds up Selling Here

50. That the "used car lot" which is made attractive will serve merchandising purposes vastly better than one that stands only as an unsightly "eyesore" has been proved by Burwell-Harris Co., Nash dealers in Charlotte, N. C. The entrance of this company's used car lot is marked by decorative and neatly constructed sign board arrangement. Within the lot where cars are displayed is orderliness. Cars are neatly displayed, no trash piles are permitted, no whitewash signs besmear windshields. In fact, it is an outdoor "showroom." The company profits in the fact that the buyer does not feel that he has hit a "junk yard."

TIRE FLAT?



Look for the Red Man

15116 Detroit Avenue

WHEN you discover a Flat, punctured or otherwise; just Call Lakewood 4637 before 10 a. m. and we will call for and REPAIR and have it READY WHEN YOU WANT IT!

Morrow Auto Acc.

J. M. VAN TASSEL

POST THIS IN YOUR GARAGE

Store Closes 8:00 P. M.

This card distributed to car owners brings accessory business to Morrow Auto Accessory Co. Illustrating plan No. 52

Salesmen and Shopmen Get Commission In Accessories and They Sell 'Em

51. Take it from the Schott-Halsey Motor Company, Studebaker dealer at Yakima, Washington, it pays to allow salesmen a commission on the sale of accessories. Schott-Halsey not only allows this compensation to salesmen but also to the shop foreman and his assistants. Result: Everybody gets in behind accessory sales. With the accessory stock averaging \$1,800 it was turned approximately 7½ times in 1925. Tires and tubes subjected to this same pressure and with the stock averaging about \$1,600, were turned five times. The net profit on accessories, tires and tubes amounted to \$7,000. The shop men sold about one-third of the accessories. With 148 new cars sold in the year 98% went out with motometers, 98% with front bumpers, 92% rear bumpers, 95% with spare tire, tube and tire cover and 50% with heaters.

Owners Trained to Call Him up Whenever One of the Tires Goes Flat

52. Specializing in making service calls for tire repair jobs has boosted business for J. M. Van Tassel, who sells accessories and tires and does general repairing in Lakewood, a suburb of Cleveland. Mr. Van Tassel has trained owners in Lakewood to telephone his place when a tire goes flat. On all such calls received before 10 a. m. he responds with a service car in charge of a man who will take off the damaged tire, put on the spare and take the damaged tire to the shop to be repaired. He charges 35 cents for the service call and the repair job costs the normal rate.

"Closing Room" Has Many Advantages in Merchandising the Accessories

53. You will find an enterprising dealer every here and there who likes the idea of a "closing room" both for closing the new car sale and for the opportunity of selling accessories. The Hubbard Auto Sales Co., Ford dealer in Los Angeles sells many accessories in its "closing room." Here the buyer sees accessories on black-covered boards.

Times Letters for Afternoon Delivery in Order to Get Best Notice

54. To make sure of the best reception for your merchandising letters to prospective accessory buyers mail the letters so they will be

rule, is not piled up with mail and to reach the home in the more leisurely part of the day for that establishment.

Stock Displayed in Aisles on Tables Is Found A Selling Stimulant

55. Here is a department store suggestion for the accessory dealer. The Main Auto Supply Co., Fort Wayne, Ind., has found it very effective to display accessories on tables in the aisles of the store where customers can look the items over at will and where the patron will be found to notice them. That "desire to possess" often is developed by handling and examining.

Here's A Good Way to Collect From Those Slow-Pay Customers

56. Accessory merchants who sell on credit always experience more or less trouble with customers who are slow in paying accounts. J. W. Tannehill, tire and accessory dealer at Norfolk, Neb., has a collection plan that helps considerably in this connection. His collection letters, all labeled "COLLECTION DEPARTMENT" in bold type are in vivid colors. Each succeeding letter is in an envelope of another color—each purposely made conspicuous, with the thought behind the scheme of making the recipient feel "conspicuous" upon receiving them. The money follows.

All Employees Trained to Spot the Owner's Accessory Requirements

57. The Sommers Oil Company, Denver, Colo., does a large business in accessories and tires. One reason for its fine accessory turnover is that employees of all departments are trained to "look for the missing accessory"—or rather where it should be but isn't. The car washer, battery service man, filling station man—and others in contact with car owners make it a point to examine the car for accessory needs and suggest purchase to the customer while the car is at hand.

This House Finds it Profitable to Offer Accessories in Groups

58. Offering the car owner accessories by "groups," rather than trying to sell each item separately has boosted the accessory business for Thomas J. Doyle, Dodge Bros. distributor in Detroit. One group, for example, consisted of bumpers, extra tire and tube, Motometer or automatic windshield wiper, monogram Motometer cap with lock, or chains—which could be bought at about a 10% discount.

25 Accessory Ideas on These

received in the afternoon. That—from the experience of John Benchoten & Co., Inc., Poughkeepsie, N. Y. This concern gets good results from its mail campaigns but it wants its letters to reach the office man when his desk, as a

Accessories Displayed on Walls of Yard Make the Selling Easier

59. The Fuller Storage Battery Co., Hartford, Conn., conducts primarily a battery business but its opportunity to sell accessories was so obvious it began stocking with accessory items. It began displaying accessories along the wall surrounding its large service yard and found the plan very gratifying by way of sales suggestion to the owner. Of course the scheme was supplemented with verbal efforts.

Draws Trade By Stocking With Some of the More Unusual Items

60. Specializing in stocking with certain "out of the way" items that the average accessory store does not carry has been valuable to the business of the Hermann Auto Supply Co., Kansas City, Kan.

"Say, I'll bet you can get it at Hermann's."

That is what this system causes many owners to remark to friends who are seeking unusual articles—and so on this policy Hermann brings trade to his store.

Accessory Department in Service Station Brings Home the Bacon

61. The accessory department of the Oakland Motor Car Company's Atlanta branch is in the service station—not out "front." The branch has demonstrated the value of service station contacts to accessory selling in the big accessory business it has built up. Its stock includes articles in more common demand and necessary to the car owner's purposes rather than "frills." In this way it can more successfully appeal to the owner of the old car as well as the buyer of the new one.

Boost Accessory Business By "Selling" Public the Company's Location

62. One of the aces played by the Auto Equipment Co., Indianapolis, in the sale of accessories is "selling its location." To begin with it has a good location and in its promotion efforts it always says: "This is 1021 North Meridian Street." By constantly hammering on location it causes car owners to associate its name with its address. The company thus does not subordinate the name it prefers to go by as in the case of Brown & Company which changes its style to "The Main and Broad Street Accessory Store."

Dull Winter Period A Good Time for Accessory Mail Campaign

63. Slackening of new car sales in dull winter months is materially offset by Edward Lewis, Inc., Cadillac dealer at Great Neck, N. Y., through intensive mail campaigning featuring accessories and service. In one instance where 350 cards were sent out centering attention on a single accessory item about 100 sales of this article were made at a gross profit of about \$9 each. These campaigns stress specific and seasonable items.

Selling Two Pages

(See following pages for
Service Plans)

Patron's Interest Picks up When Card Signs Give Important Information

64. Many motorists even upon seeing a certain accessory have no idea as to what it is for. Others interested especially in the identity of the manufacturer are not told by passing glance who he is. Still others are not interested unless they know—**price**. The Wolf Auto Supply Company, Kansas City, Mo., met these contingencies by displaying accessories on cardboards bearing information answering such questions. The interest of customers in these products immediately picked up and better sales resulted.

Card Index Tells How to Proceed With Accessory Selling Program

65. When a new car is sold by the Packard Detroit branch an instruction sheet is made out which among other things shows what accessories were bought. From a copy of this sheet the accessory department makes out a filing card which is used in subsequent accessory selling efforts. The card shows a list of accessories. Those already bought by the owner are checked off and as he buys items later they are checked off.

An Effective Plan for Selling Extra Accessories Installed on Car

66. Selling accessories by putting them on a car for their stronger appeal has been an especially successful method for the Capital Overland Co., of Indianapolis. First, however, the prospect is sold on a car without accessories. Then he is taken to one fully equipped and told how much this car will cost as it stands with its variety of accessories. On one occasion such a car was even given a special name, "Capitol Overland Special."

Items for the Angler Go Well With Accessories When Sold Like This

67. As a side line to its tire and accessory business and an auxiliary booster for that trade the Master Tire Co., of Birmingham, Ala., stocks with items needed by the fisherman. In addition to carrying a complete line of fishing tackle and motors for use in boats during the fishing season the company maintains an information service for anglers that draws many of them to the store. Besides getting a profit on fishing supplies this department develops accessory and tire sales.

Monthly "Trade Days" Produce Accessory Profits for Lampasas Firm

68. The Holly-Langford Motor Co., of Lampasas, Tex., Chevrolet dealers and large accessory handlers, has been moving accessories and tires readily through its "Trade Days" each month. Each month the company



Car salesmen and shop men are given commissions on accessories by the Schott-Halsey Motor Co., Yakima, Wash. Illustrating plan No. 51

stages a week of "Trade Days" during which accessories and tires are offered at especially attractive figures. The next week prices go back to the regular lists. The "Trade Days" help swell the month's profits on tires and accessories and furnish many selling leads for the Chevrolet salesmen.

Radio Leads and Sales Result From Play to Local Football Fans

69. Practically everybody for many miles around Urbana, Ill., is interested in the big "homecoming" football game that features the season each fall at the University of Illinois. Capitalizing this interest the Ludlow Garage & Service Station, Ludlow, Ill., handling radio, makes the practice of inviting the entire countryside to its place to hear radio returns of the big game. The stunt develops leads for immediate radio business and creates interest expected to result in later sales. Also it attracts attention to the general business operated in a town of but 350 people by Sheehan Brothers & Johnson.

Free Chain Service Attracts Owners to Store in New Rochelle

70. By featuring "free chain service," George J. Bender, a merchant of New Rochelle, N. Y., has attracted many customers to his accessory store. Tire chains are installed without charge, an accommodation appealing not only to women in particular but to many men. During the winter Bender even installs and repairs non-skid chains free of charge, making a charge only where new links or parts are needed, but never charging for the labor or minor repair attention.

Dealer's "Clean Up and Paint Up" Campaign Rings Store's Cash Register

71. Dad's Auto Accessories of Nashville, Tenn., did not wait for the newspapers to start a "Clean Up and Paint Up" campaign. The company launched a campaign of its own, providing stimulus with considerable advertising and stressing the need of paint, top dressing, polishes, accessories and other things that add to the appearance of the motor car. The campaign materially increased seasonal sales.

He Makes a Specialty of Outfitting the Summer Vacation Motorist

72. A Washington, D. C., garageman who has a well equipped shop specializes in outfitting vacation

motorists who want their cars tuned up for the trips and in supplying them with camping necessities. His plan has proven attractive in that he is in a position to cover practically all such wants and sell supplies to good credit risks on a time-payment arrangement. In some instances he even lends money, to spend during the trip, on the automobile as security. He also will rent a car to the non-owner by the week or month.

Service Men Get a "Cut-in" on Sales and It Pays in This Case, Too

73. Service men as well as new car salesmen employed by the Chester N. Weaver Co., Studebaker dealer in San Francisco, are interested in the sale of accessories. The reason is that the service men are paid 2½ per cent on all accessory sales that result directly through them. Salesmen are allowed 5 per cent commission on accessories. The company does other things to boost accessory trade but this plan has been especially valuable. Incidentally the company does around \$15,000 monthly in accessories.

"Sell 'Em Through the Window," Says This Merchant—We'll Say He Does

74. If you ask William J. Morgan, head of Morgan Motor Co., Ford dealer, Newark, N. J., how to sell accessories he will say, for one thing—"through the window." Morgan Motor Company is noted for window displays that get business. A permanent window exhibit presents some bees in a glass hive which go and come through a pipe. They make honey right there. People gather to watch them and they also see accessories and read appealing sales messages.

A Direct Mail Idea from a House That Knows "How"—It Puts Them Over

75. The L. & H. Motor Company, Hupmobile dealer in Hartford, Conn., obtains exceptionally fine results in mail campaigning for accessory sales. One of this company's effective pieces of literature, signed by the parts and accessory department manager and bearing his picture, was prepared to stress winter accessory needs. To the left was a row of cuts of chains, cross links, radiator cover, bumper, motometer and a windshield wiper, while in bold type in the page these items, with prices, were listed along with several other seasonal necessities. It was the sort of stuff that usually gets business and it did.

FRANK J. RILEY CORPORATION
SERVICE BOND
GUARANTEES SATISFACTION

This is to Certify, that _____ has this day purchased a _____ Automobile, Type _____ Serial No. _____ Motor No. _____ which carries with it for the original owner the following guarantee:—

(1) To be free from defects in material and workmanship at time of delivery

(2) We agree to replace and install free of charge, (at the original place of delivery) any parts thereof, which, under normal and reasonable use shall prove upon our examination and to our satisfaction, to be unfit for the proper operation and running of said _____ Automobile, this to cover a period of thirty (30) days, providing that said _____ Automobile has not been repaired or altered outside our shops, in any way, so as to, in our judgment, affect its stability or reliability and further providing that said _____ Automobile has not been subjected to misuse, negligence or accident.

(3) We further agree to furnish free of charge and install at our actual cost any necessary parts, over a period of Sixty (60) days following and according to the provisions of Thirty (30) day period specified in paragraph two (2) of this agreement on said _____ Automobile

(4) This agreement does not include maintenance, such as valve grinding, brake lining and other work known as maintenance

Signed _____
FRANK J. RILEY CORPORATION

By _____

Dated this _____ day of _____ 19____ At _____ California
1221 South Figueroa Street.

This service bond guarantees the work done on used cars sold by the Frank J. Riley Corporation. Illustrating plan No. 80.

Sign Board Space Brings Service Station Return of \$1080 a Year

76. Thomas Foley, operating a service station at Hartford, Conn., found extra profits in the sale of sign board space. After slicking up his establishment and surroundings to make it all more attractive he erected six sign boards at a cost of \$450. They sold at \$15 a month.

"Your Own Mechanic," Like Your Favorite Barber, Serves You Here

77. In the barber shop you like to be served by your own barber, in the store by a favorite salesman. So—why not your favorite mechanic in the garage? Yes—especially in the garage!

That is the sort of service offered by the Monnot & Sacher Co., Ford dealers, in Canton, O. The scheme was worked out by Dorwin Sprague, service manager, and it is going "big." Every mechanic has his own bench and tools. The car owner specifies the mechanic he prefers.

A Business Puller Which Is Constantly at Work in Owner's Garage

78. Twice a year the Foss-Hughes Co., Pierce-Arrow distributors and dealers in Philadelphia, sends each of its customers a "Service Bulletin" made of tough cardboard and with a hole in the top so it may be hung up in the garage. On one side of the bulletin are suggestions for the owner to follow in care of the car, washing, polishing, etc. On the other side the company gives flat rate prices for certain forms of service.

Selling Lubrication and Tightening on An Annual Basis a Harvest Reaper

79. Selling lubrication on a yearly basis at a flat price has been highly profitable to the McBride Lubrication Service, Los Angeles. Under the McBride plan the owner pays \$36 in advance for thorough lubrication service and tightening every 500 miles. The service is really good for 12,000 miles of driving and the owner is told that if any part goes wrong through lack of lubrication in this service McBride will pay for it.

"Service Bond" Wins Confidence of Patrons and Accelerates Business

80. The Frank J. Riley Corporation, Paige and Jewett dealers, Los Angeles, features a written "Service Bond" with all late model used cars it sells that have been reconditioned in its shops. This "Service Bond" provides that the company will make any necessary replacement of parts without charge during a period of thirty days after sale; and will furnish free of charge and "install at our actual cost" any necessary parts during the second month.

"Tag Boy" System Goes to the "Source" to Land Day Storage Volume

81. The T. A. G. Garage, Seattle, Wash., has built up a capacity storage business and general servicing business through its "tag boy" system. "Tag boys," unmistakably labeled and in white uniforms, station themselves at office building entrances and other busy centers to serve the owner hunting a parking place. The "tag boy" takes the owner's car, gives him a receipt and returns it when phoned for.

Free Brake Inspection Campaign Will Cause Sharp Pick-up in Shop Jobs

82. What about a "brake inspection campaign", as a means of increasing business in the service department? Such a campaign is a good thing for your community, anyhow, from a safety standpoint. It is easy to win public support for the movement. George W. Arnold, owner of the Keystone Garage, Kansas City, Mo., reported an increase of more than \$50 a day in shop business after such a campaign.

Good Work Insured by Bonus to Mechanics on Jobs That Don't Come Back

83. Paying mechanics a bonus on repair jobs that do not come back within 50 days because of faulty workmanship is the plan used by the Allen Auto Repair & Accessory Shop, Kansas City, Mo., to insure excellence of service operations. The bonus amounts to 5 per cent of the total charge on the job. At the same time the mechanics are paid the same on the "come-back" job as for the original work.

25 Service Ideas on These

Sale of Gas and Oil Only the Starting Point in Trade Through This Coupon

84. "This coupon presented at our filling station entitles you to one cent per gallon on Red Crown gas or 5 cents per quart on oil purchased with coupon."

Such is the wording on a coupon distributed over its community by the La Belle Auto Service Station, 63rd St. and Indiana Ave., Chicago. It brings motorists to this garage not only to buy oil and gas but to "get acquainted."

How a California Garage Mixes Accommodation With Profit Program

85. The Eureka Garage and Service Station, Eureka, Cal., increases maintenance business through use of a tag tied to the steering wheel of every car brought in for storage or repair work. In addition to telling the owner about his gas and oil supplies and stating that the windshield has been cleaned and radiator filled the card notes the general condition of tires, fan belt, brakes and lights. It also prices such work as dusting, washing and greasing.

They Have a Well Equipped Shop and Merchandise This Information

86. Capitalization of the well equipped shop for Ford service is made by the Burton Motor Company, Royse City, Tex. It sent Ford owners a folder listing "25 reasons why" they should come to this establishment for all Ford maintenance attention. As 24 of the reasons the company listed items of shop equipment in its plant. As the 25th reason it listed Flat Rate.

Extra Pin Money for Service Station on Popular Road Can Be Made Like This

87. A tip for automotive establishments along much traveled highways is found at the place operated by H. S. Nelson, Gurdon, Ark., a filling and service station. Mr. Nelson erected a small log cabin which he rents to tourists who want shelter for the night. There has been such demand for use of this structure he plans building others.

Ohio Garage Uses "Courtesy Card" Plan With Some Different Wrinkles

88. The Thompson Garage, 318 West Market street, Lima, Ohio, has made many friends of motorists through its "courtesy" policy. When a car is stored there for the night, for instance, an employee cleans the windshield and sees that the radiator is full of water, examines the gasoline supply and inspects the supply and condition of oil. In the morning the patron is handed a "Courtesy Card" which tells what has been done and reporting on the gasoline and oil. Now and then the patron is forewarned of possible future trouble with some imperfect condition found in the car or told about how much longer he should go before changing oil.

Selling Two Pages

(See next page for the
101st Plan)

Offer a Lot of Service at \$8 a Month
But Plan Pays the Company

89. The Newby Garage System, which maintains shops in Dallas, Fort Worth and other Texas points, has made a big success with its monthly flat price maintenance plan. It contracts with individuals and fleet owners to service cars at a charge of \$8 (and up) monthly per vehicle. In addition to furnishing pull-in service, periodical inspection, greasing and making any adjustments the service includes replacing broken or worn parts through accident or other cause with no extra charge for replaced parts. A car, given this service must be in good condition in the beginning.

Free Road Map Brings Tourist His Way
for Possible Servicing Operations

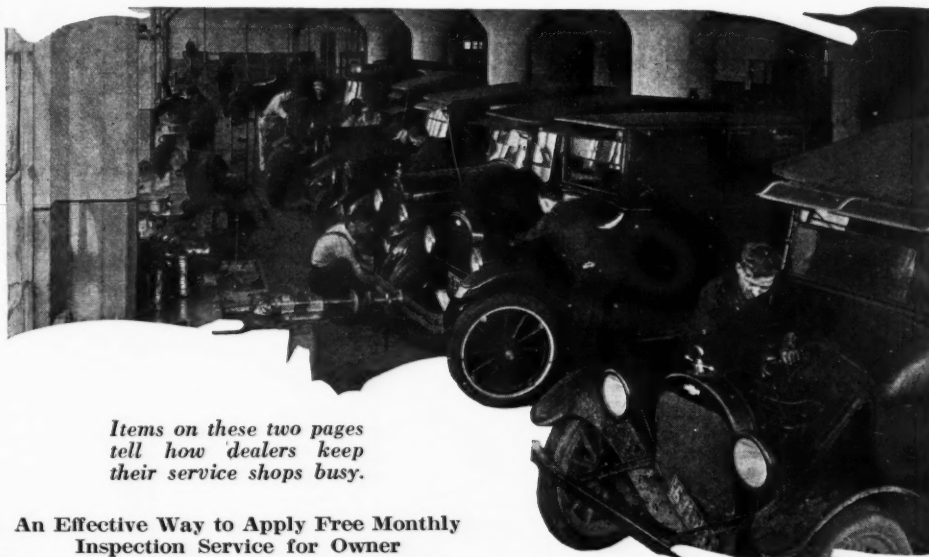
90. Go to many of the progressive automotive establishments on popularly traveled highways if you want to find out about the value of contacts with owners through information service. The philosophy of these fellows is: "Help 'em out and they'll come in for business and then remember you and tell others." The Hugh Williams Co., operating a filling station and garage at Clovis, New Mexico, prepared a special road map of one great section of the west offered free to anyone passing and anyone writing for a copy.

Photographs of Service Men in Promotional Matter Help Business

91. By making its customers and the public well acquainted with its department managers and their assistants, the L. & H. Motor Company, Hupmobile dealer at Hartford, Conn., finds it broadens its road to extra profits. In line with this policy the company wants the service department men, especially, to cultivate acquaintance—knowing the power of this personal touch in building business. Liberal use has been made, therefore, of photographic likenesses of the service manager and his assistants in promotional literature.

Special Bargain Featured Each Month
As Service Department "Leader"

92. Here is one from the Tate Motor Co. of St. Louis, Dodge Brothers dealers. Each month it offers some form of servicing at an especially low price. For example, January's "special" was for decarbonizing jobs at a reduced charge of 25 per cent—with the result that about 360 such jobs were handled as against 78 in December. Another "special" was for relining brakes and another for repainting.



Items on these two pages
tell how dealers keep
their service shops busy.

An Effective Way to Apply Free Monthly
Inspection Service for Owner

93. The Gus D. Revol Cadillac organization in New Orleans sells its patrons on its free monthly inspection service. At this time the owner tells the service man about anything he suspects has not been performing correctly and the shop's experts go over the car thoroughly to ascertain the condition of different units. This diagnosis is made before the owner leaves the shop and if work on the car is necessary he is so informed and given the price.

A Good Winter Suggestion and With
Proper Alterations Good Any Time

94. Folders containing winter service suggestions are sent to car owners by the Vesper-Buick Auto Company, Buick dealers at Vandeventer and West Pine streets, St. Louis. On each folder is a list of the company's suggestions and the owner is invited to check the items he thinks his car needs and bring in the folder when he wants the work attended to.

Salt Down This Sims Plan for Reference
When Freezes Come Again

95. During the winter months nothing is watched more closely at the Auto Service Garage, Champaign, Ill., than the official weather forecasts. H. A. Sims, the proprietor, wants these reports as soon as they are issued. If a sudden fall in temperature with a freeze is coming, or if there is forecast of a winter storm a girl immediately conveys this information over telephone to all "live" owners. It takes her from four to five hours but it makes future business and often she runs into a case where service is needed already, either from winter conditions or from other causes.

At "Edge of the Wilderness," But Dealer's
Plan Makes Both Friends and Money

96. J. A. Rothman, Ford dealer at Ely, Minnesota, is doing his best to capitalize on the vacation season with a brand of information and accommodation service that makes him many friends. If recommendation of a resort is wanted, Mr. Rothman can furnish it. If assistance in planning a canoe trip, he is prepared to advise on that, too. In brief, he makes a business of helping the stranger and greenhorn in his outdoor country every way he can.

Obtain Closer Owner Contact by Having
Same Man Receive and Deliver

97. Excellent results have been obtained by the Butler Motor Co., Dodge Brothers distributors and dealers in Kansas City, through a system whereby the same service salesman who receives a maintenance customer takes the order for work, sees that it is properly done and delivers the car to the owner personally after the job has been finished. Through mechanical inspection and driving the car the service salesman is able to make valuable suggestions to the owner that create a friendly feeling.

Eliminate Car Loaning Bugbear by Renting
Machines During Service Work

98. To any user of a Dodge Brothers car who brings in his machine for repairs the Tate Motor Co., St. Louis, will lend a similar vehicle for 10 cents a mile. The scheme was launched in March with two cars and now seven are in almost constant use. B. R. Ford, general manager, estimates a saving of from \$300 to \$400 a month by eliminating the necessity of lending cars to service patrons free of charge.

Birthday and Christmas Cards Bring
Back Patrons Who "Wandered Away"

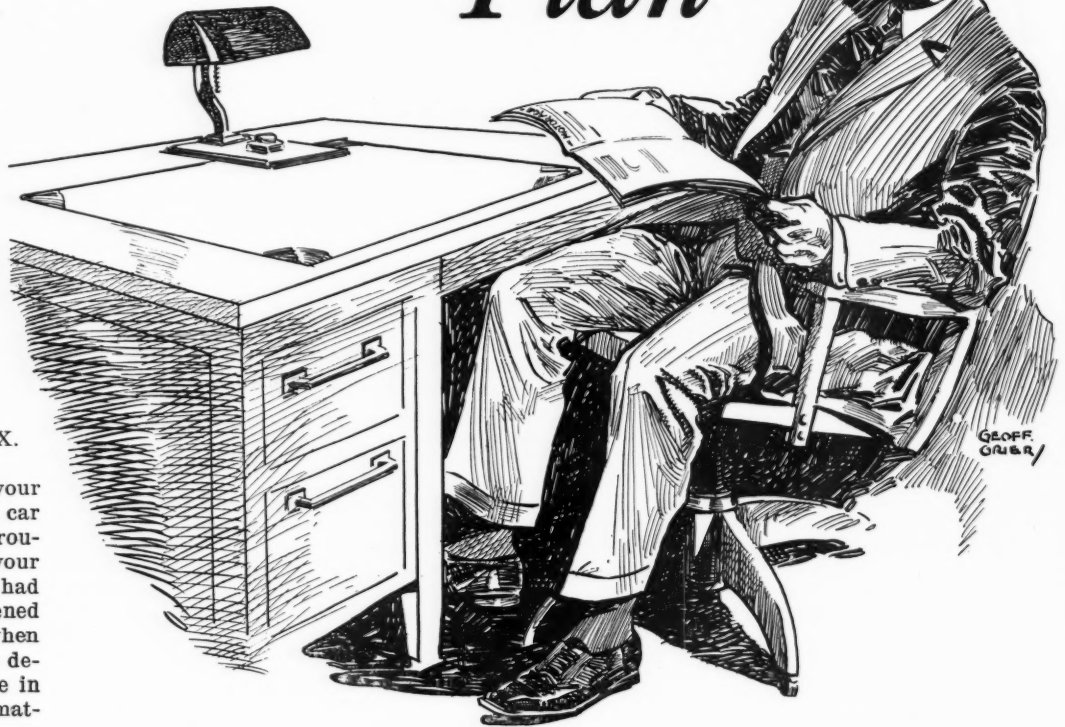
99. When a car is sold by Edmund Riselay, Ford dealer in Buffalo, the buyer is asked the date of his birth. Then when the buyer's birthday comes he receives a card of felicitation from Mr. Riselay. This dealer also sends out many Christmas cards—the card idea, on the whole, contributing much toward the maintenance of friendly relations with owners.

Public Is Sold on Fact That Mechanical
Experts "Know Their Stuff"

100. An automotive establishment which has built up an especially successful maintenance department is the J. V. Baldwin Motor Co., Chevrolet dealer in Los Angeles. This company puts unusual pressure behind the merchandising of its service facilities—both the equipment and the mechanics. Especial stress in promotional effort is placed on the competency of its mechanical force. It lets the owner know these men "know their stuff" and in thus selling its talent and the completeness of equipment it sells service, and lots of it.

The 101st Money Making Plan

Read MOTOR AGE Every Week



GATESVILLE, TEX.
To the Editor of Motor Age:

We certainly appreciated your letter of Feb. 23 regarding the car with which we had so much trouble. As soon as we received your letter we felt sure that you had hit the bulls-eye. It so happened that the car was in the shop when your letter arrived, we having decided that the trouble must be in the carburetor. It was only a matter of a few minutes to try your suggestion. We could tell the difference immediately and now after three weeks, the car still runs fine and has all its new power and pickup. The owner is delighted and certainly is giving us some fine advertising.

We have always been mighty well pleased with Motor Age and now feel that our small investment in this excellent trade magazine has indeed brought a return of a hundredfold.

P. H. Olsen,
AUTO WRECKING CO.

EUSTIS, FLA.

To A. H. Packer,
Associate Editor, Motor Age:

Thanks for the information, but I sold out my business in Newfork last October and have not received Motor Age since. Could I procure the five issues mentioned in your letter? I have just started in business down here and consider Motor Age a necessary part of my equipment. I have been reading your articles for the last few years and have been greatly benefited thereby.

BERNARD BOYLE.

WARSAW, IND.

To the Editor of Motor Age:

We look forward each week to our copy of Motor Age and we cannot see how any firm in the automotive industry today could afford to be without this wonderful trade journal.

Gael D. Munson,
MUNSON BROS. GARAGE.

DES MOINES, IA.

To the Editor of Motor Age:

Am happy to say I have found much valuable information in Motor Age, which has been a great help to me in my three years as a dealer and I certainly intend to continue its use.

Ward Huntzinger,
OVERLAND HUNTZINGER CO.

These and Many Other Dealers Say It Pays

CLOVIS, N. M.

To the Editor of Motor Age:

Haven't failed to file a Motor Age away for years. Great reference. Often have to dig one out that is under a ton of same.

Hugh Williams,
HUGH WILLIAMS CO.

HARTFORD, CONN.

To the Editor of Motor Age:

You are to be congratulated on the excellent show issue of Motor Age. We have read this copy over carefully and it will be preserved in this office for reference during the year.

We always look forward eagerly to the day we receive Motor Age and feel that it does a lot of good in the industry.

Thomas W. Campbell,
L. & H. MOTOR CO.

VALPARAISO, IND.

To the Editor of Motor Age:

Wish to thank you for sending the issues of Motor Age which we were short in order to complete our files. In the writer's opinion the Motor Age is by far the best trade paper in the automobile industry and we hope that it will continue to be the leading publication for some time to come.

M. F. French,
FRENCH MOTOR CO.

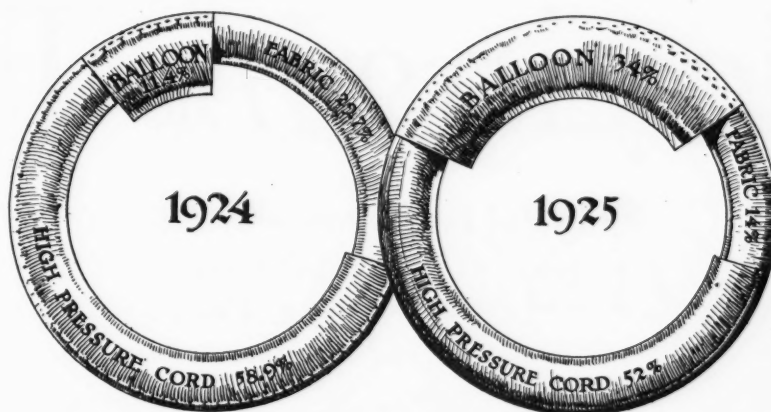
PHILLIPS, ME.

To the Editor of Motor Age:

Every week I look for Motor Age. The Clearing House surely helps a fellow and I feel that Motor Age is worth all and more than I pay for it.

Evan S. Hutchins,
AUTOMOBILE REPAIRING.

Production of
Balloons In-
creases Rapidly
as Fabrics and
High Pressure
Cords Decline



Comparatively
Few Sizes, How-
ever, Give Dealer
Stock to Take
Care of Majority
of Cars

Tires Mean Profit to the Automotive Merchant

AN increasingly large number of automotive merchants tell Motor Age that they make a good profit from tires. The tire is an item of motor vehicle equipment that must be consumed and replaced with regularity, according to the use of the vehicle.

The average number of pneumatic tires replaced per vehicle for the last seven years follows:

1919	4.00	1922	2.27
1920	2.82	1923	2.17
1921	2.05	1924	1.93
		1925	2.25

It is fairly safe, therefore, for the automotive dealer who has a definite clientele of car owners to determine how many tires his list of customers should buy in the course of a year. And then if he sells those tires on a good merchandising basis he will have reaped a very satisfactory additional profit.

The growth of balloon tires is shown by the following table giving percentage of chassis model providing balloon tires either as standard or optional equipment:

Year	Balloon Tires	Std. Equip. per cent	Optional at extra cost per cent	No provision per cent
1924		3	27	70
1925		61	29.5	9.5
1926		80	11	

Of course, owing to the large number of cars produced in former years with standard pressure cords the replacement market up to this time has been predominantly in the high pressure field. In 1923, however, balloon tire production in-

creased nearly 300 per cent, showing the effect of the replacement market that is coming into existence following the adoption of the balloon equipment as standard by car manufacturers in 1924. Another great increase in balloon tire production will be registered this year.

The production of pneumatic casings by types was in the following proportions in 1924 and 1925:

	1924 Per cent	1925 Per cent
Balloon	11.4	34
Fabric	29.7	14
High Pressure Cord	58.9	52

The following table lists the various makes of sizes of balloon tires and gives the makes of cars using each size:

Size	No. of makes using	Size	No. of makes using
29x4.40	5	32x6.00	1
29x4.95	2	32x6.20	20
30x4.75	2	33x4.95	1
30x4.95	2	33x5.77	1
30x5.25	4	33x6.00	10
30x5.70	1	33x6.20	2
30x5.77	7	33x6.60	1
30x6.00	1	33x6.75	8
31x4.00	1	34x7.20	1
31x5.25	16	34x7.30	3
31x5.45	1	35x6.75	1
32x5.77	2		

A replacement tire market of approximately \$810,000,000 is estimated for this year by the Commercial Survey Department of the Chilton Class Journal Co. This market in 1924 amounted to \$565,000,000 and in 1925 to \$675,000,000.

Recommended Air Pressure for Balloon Tires

Car	Tire Size	Suggested Air Pressures			
		Front		Rear	
		Min.	Max.	Min.	Max.
Ajax	30x4.75	30	35	30	35
Auburn	30x5.25	35	40	36	40
Auburn	30x5.77	35	40	36	40
Buick	31x5.25	30	40	32	40
Buick	33x6.00	30	38	32	38
Buick	33x6.00 H.D.	30	40	32	40
Cadillac	33x6.75 H.D.	36	40	38	40
Chevrolet	29x4.40	28	36	32	36
Chrysler (6)	30x5.77	35	40	40	40
Chrysler (4)	30x5.25	30	40	36	40
Chrysler (4)	30x5.77	30	40	36	40
Cleveland	30x4.75	32	38	34	38
Cleveland	31x5.25	32	38	34	38
Diana	32x6.00	30	36	32	36
Dodge Brothers	30x5.77	30	36	32	36
Dodge Brothers	31x5.25	30	38	32	38
Essex	30x4.95	30	36	32	36
Flint	30x5.77	30	35	30	35
Flint	32x6.20	30	35	30	35
Ford	29x4.40	27	34	30	34
Franklin	31x5.25	32	38	34	38
Gardner	31x5.25	30	38	32	38
Gardner	32x6.00	30	38	32	38
Hudson	33x6.00	30	38	35	38
Hupmobile	31x5.25	30	38	32	38
Hupmobile	33x6.00	32	38	35	38
Jewett	31x5.25	32	38	34	38
Jewett	29x4.75	34	38	34	38
Jordan	32x6.20	30	38	32	38
Kissel	33x6.00	30	38	32	38
Kissel	33x6.00 H.D.	30	40	34	40
Lincoln	33x6.75 H.D.	35	40	38	40
Lincoln	34x7.30	30	38	35	38
Marmon	32x6.20	35	40	35	40
Marmon	34x7.30	35	38	35	38

Car	Tire Size	Suggested Air Pressures			
		Front		Rear	
		Min.	Max.	Min.	Max.
Moon	30x5.25	30	38	33	38
Moon	31x5.25	30	38	33	38
Moon	32x6.20	30	38	33	38
Nash	31x5.25	30	38	32	38
Nash	33x6.00	30	38	32	38
Oakland	30x4.95	35	38	35	38
Oakland	30x5.25	33	38	33	38
Oldsmobile	30x4.95	32	38	35	38
Packard	33x5.77	35	38	35	38
Packard	33x6.75 H.D.	35	40	35	40
Paige	33x6.75	30	38	32	38
Peerless	33x6.00	30	40	35	40
Peerless	33x6.75 H.D.	30	38	34	38
Peerless	32x6.00	30	38	35	38
Pierce-Arrow	32x5.77 H.D.	36	40	36	40
Pierce-Arrow	34x7.30	30	38	34	38
Reo	32x6.20	30	38	32	38
Rickenbacker	31x5.25	32	38	34	38
Rickenbacker	33x6.00	32	38	34	38
Star	29x4.40	28	34	30	34
Studebaker	31x5.25	32	38	36	38
Studebaker	32x6.20	30	40	36	40
Studebaker	34x7.30	30	38	32	38
Stutz	32x6.20	30	40	36	40
Stutz	33x6.75	30	40	36	40
Velie	31x5.25	30	38	32	38
Velie	33x6.00	30	38	32	38
Wills-Ste. Claire	33x6.00	30	38	32	38
Wills-Ste. Claire	32x6.20	30	38	32	38
Willys-Knight	30x5.77	34	40	36	40
Willys-Knight	32x6.20 H.D.	34	40	36	40
Willys-Overland (91)	29x4.95	30	38	32	38
Willys-Overland (93)	29x4.95	34	38	34	38
Willys-Overland	30x5.25	32	38	32	38

The foregoing list of recommended balloon tire air pressures is taken from a list compiled and published by the Dunlop Tire and Rubber Co., Buffalo, N. Y.

Surveying The Field

A Careful Investigation of Local Conditions Before Starting in as an Automobile Dealer Will Help Determine Proposed Venture's Potentialities for Success

By CLARENCE PHILLIPS



The Prospective Dealer—His Business Dream and Two Vital Questions

① *Am I qualified to be an automobile dealer?*

② *Is this community a good one in which to sell the car I am considering?*

WERE there only a school for prospective dealers and all prospective dealers could be induced to go through that school before signing a contract for a line of cars—there would not be so many dealer failures.

Why do dealers fail?

Well, in numerous instances it is because they get off on the wrong foot. They do their leaping before doing much looking—instead of looking carefully before attempting to begin business.

As a result many find themselves in a business for which they really are not fitted, or trying to do business in a locality offering little or no opportunity for the car they handle. Perhaps they have only succeeded in making an already congested competitive situation still worse by their presence.

Over-dealtered fields are as bad for the individual dealer as for the trade at large, but the inexperienced newcomer seldom thinks of that. Too ready is he to follow the theory that there "is always room for one more."

We ask: Why will a new dealer enter a community wherein his own competitive group already is overcrowded? Why will a new dealer start up in a community with a car for which there is no profitable local market? Why is it that a new dealer will start business in a community without even rough knowledge as to what the potential opportunity is for the particular car he intends to sell.

The answer to each question is the same: Preliminary error. No preliminary investigation. A foolish notion that cotton can be grown successfully in northern Wisconsin, or that oranges would be a profitable crop in Iowa. The inspiring "desire" to be an automobile dealer unsupported by anything substantial. Just the desire—that's all.

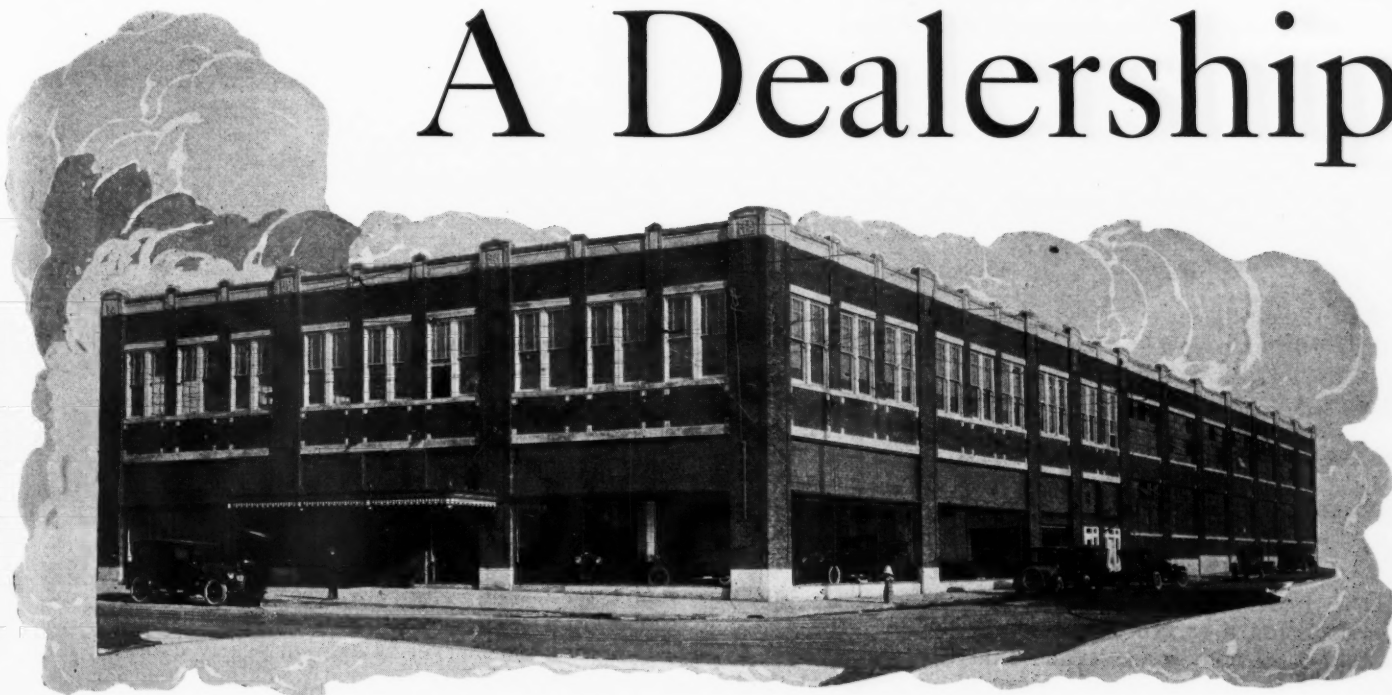
And desire alone is much inadequate notwithstanding the ever-presence of an amazingly large number of raw recruits whose reasons for launching out in business and whose individual qualifications go out little further than that.

An illustration in point is found in the case of a young man who recently announced that he was going to buy out a dealership. He had \$5,000 in cash of his own, knew where he could borrow \$7,000 more, and save for a few necessary formalities he was all set to go.

"How do you know," he was asked, "that this will be a good proposition?"

"Why," he replied, "it is the only agency for this make in the town and the car is one I feel sure I can sell. The town is a county seat and a good business center. The present dealer has been handi-

Preliminary to Launching A Dealership



capped through the fact that he has other interests demanding his attention and yet he claims to have made money on automobiles. And," the young man added confidentially, "that fellow is not much of a salesman. I know how to sell."

To make a long story short, that about sizes up the extent of investigation he had made. He did not know what had been happening in that competitive field, had made no study of registrations whatever, had made no economic study at all in order to get a line on the possible buying power of the community in relation to a specific car. He had seen the books of the dealer who wanted to sell and had accepted the figures he beheld at face value.

It Looks Good But Is It?

All he knew for sure was that—here was a chance to have a dealership, that the location, without close examination, looked good to him, that the make of car he would sell was one over which he could bubble and enthuse and that he could rake up enough money to start off on the venture even more boldly—though he didn't realize that—than an experienced and successful dealer who had unlimited capital to invest.

The case might be extreme but there have been hordes of others fully as extreme and with respect to the fundamental principle violated it might be safely ventured that ninety per cent of those who have entered this business, only to succumb before getting more than well started, have been in the same boat.

In fact, this young man does represent a distinct, quixotic type of business adventurer. It is a type the members of which are often doomed to failure in the beginning, for if a man will deliberately plunge into a situation of which he knows practically nothing he demonstrates an absence of forethought and analysis which does anything but qualify him for business success.

The first essential step in planning any business under-

"Planning and Launching a Dealership"

The foregoing is the general title of a series of articles which begin with the accompanying contribution. While these articles are addressed primarily to the prospective dealer they will contain much matter of interest to all members of the trade.

Why do dealers fail?

One of the large reasons is set forth in the article herewith. It is one which the prospective dealer should know about first of all. Have you guessed it yet? Anyhow, read this article and then watch for others that are to come.

taking embraces a painstaking and thorough survey of the opportunity. In the automotive field with a dealership in contemplation it necessitates such a survey with respect to some *specific* make of car.

An investigation of this sort entails some expense, some hard work and mental application but that is the sane and conservative route. Don't sail the open seas without your charts and compass. That comparatively small sum you will have to spend for these facilities might save you thousands of dollars.

In contrast with the process adopted by the young salesman to whom we have just referred let's hear what a successful and progressive dealer has to say on the subject. A few days ago he was asked a question substantially on this order:

"If you were offered a dealership in some new locality what preliminary inquiries would you make before agreeing to take over the agency?"

His reply, based on many years of experience, was this:



Road conditions enter importantly into the prospector's line of investigation. Bad roads slow up merchandising effort and are hard on demonstrators.

PRELIMINARY SURVEY OUTLINE "A"

"If I were offered a dealership in some specific territory on a certain make of car the first thing I would do would be—get the county registration of that car in that territory. I would, naturally, make a personal survey of the town and surrounding territory; I would consult the banker with whom the outgoing dealer did business and see why he was giving up the dealership.

"I would investigate the good will the dealer and the car had created in the territory, and would investigate the various buildings which would be available in which to conduct the business. I would find out just what the rent and general overhead on this building would be. I would then find out how much of an investment and how much capital would be necessary to carry on the business, and then try to determine the number of cars I would have to sell in order to make a profit sufficient to pay all overhead, and a profit big enough to pay the interest on the investment, with enough left to pay a net profit sufficient to warrant the handling of the car in that territory."

Another exceptionally successful dealer in an entirely different price field and a much different type of city where industrial conditions are also radically different replied to the same question along this line:

PRELIMINARY SURVEY OUTLINE "B"

1. What happened to the other dealer and how many times has the agency changed hands in the last eight to ten years?

2. Where that particular territory stood as far as dealer average was concerned, as against national averages on units delivered.

3. Manufacturer's reputation and service policies.

4. Local banks—whether they were carrying very much automobile paper and if it would be possible to sell a bank on sound service and merchandising policies as related to the automobile business. (I suppose this would be some job if the banks generally had been burned.)

5. Percentage of time payments in the territory.

6. Used car market.

7. If the dealers were properly organized and if a newcomer could enjoy a reasonable amount of cooperation without cut-throat methods.

8. Potential market as against yearly quotas.

9. Highway policy on good roads and whether the expansive program is keeping pace with the sale of automobiles in that particular state.

Each of the two dealers whom we quoted sets up quite a job for himself, a job, however, which is born of business understanding and long experience in successful automotive merchandising. They know their stuff. "When a fellow walks into the automobile business," one of them remarks, "with his own money and his future at stake he had better watch his step." And that is what the prospective dealer should do if he thinks much of his time and his money. This business will prove a disappointment to the person who refuses to think in advance. On the other hand it offers fine opportunity to the real business man who has forethought, who analyzes, really plans and acts. Just where that opportunity is depends on the—*preliminary investigation*.

The prospective dealer, therefore, faces an initial necessity of answering two primary questions:

(1) Am I qualified through business experience and otherwise to undertake management of a dealership?

(2) Is the community I am considering a good community in which to merchandise the particular make of car I have in mind?

A number of letters now on this desk from prominent dealers blame many failures on the absence of the necessary business foundation. Those who have failed because of this handicap simply ignored Question No. 1 or muffed the correct answer. But we will assume that No. 1 has been answered satisfactorily in the affirmative.

Now for the second question. It covers a lot of territory, in a way, demanding inquiries such as found in Preliminary Survey Outlines "A" and "B"—but the beginning place is *new car registrations*. Whatever the survey covers a study of registrations is indispensable.

Where the prospector is just studying the locality to find a good opening for a dealership, rather than surveying for a specific make, and where he seeks more complete knowledge of the whole field—he wants to procure

BEFORE LAUNCHING A DEALERSHIP

the county's entire new car sales by makes for the previous year. To obtain the best possible picture of the full competition—that is the first practical step under any conditions as it broadens the vision to know what all dealers are doing.

Proceeding along this line, therefore, you divide the county's total new car sales by the total of dealers to establish the dealer average. The national average is 71 and if you want your state average you can get that easily enough. Now, if you are thinking of selling a specific make—segregate the makes of your own competitive price group, compare the dealer average of your group with county, state and national averages—then see where your group stands on the whole and where your particular make stands within your group and generally.

Such a program has five prime objectives:

(1) It gives you a good idea how all the different makes have been selling.

(2) It tells you what your own make has done in its individual price group and on general field comparisons.

(3) It points out the strongest selling classes and shows up those which have not done so well.

(4) It tells you whether the field is over-dealered and whether your price group is over-dealered.

(5) It induces logical analysis—a most important thing.

To obtain a complete idea of what has been happening in the local trade the foregoing method is more illuminating than a partial registration study, although in instances a sectional registration study will suffice for preliminary purposes. But in the smallest study of sales it is manifestly wise to include at least your own price group in comparison with total new car sales.

Suggestions of other essential inquiries will be found in the Preliminary Survey Outlines "A" and "B." There are two good programs to shoot at and employ initially in the survey planning. Use either one or a compilation from both and add to the result as you see fit.

As one thought, look closely into road conditions. An exceptionally progressive dealer remarked not long ago that he looked on road conditions as one of the most vital considerations. Bad roads slow up merchandising efforts and are hard on demonstrators. Good road conditions and a population rather compact than scattered is one of the things this dealer would insist upon.

Don't fail to go to the Chamber of Commerce, if there is one, or other places of statistical reference, such as libraries, for data on the locality's economic and social complex. Frequently these institutions will have or be able to tell you where to get just what you want along

the line of comparative wealth, foreign ingredient, number of families, number of farms and farmers, other commercial activities, wage earners and so on.

While the 1920 census by the the government is too old for some purposes it offers valuable data for this investigation. Census compendiums for any state, giving county statistics, may be purchased from the Superintendent of Documents at Washington at nominal sums. They average possibly from 40 to 60 cents each.

It would be impossible here to outline all the things that the prospector should investigate. Often a general inquiry is necessary to obtain a line on peculiarly local complications demanding examination that could not be pre-conceived in a general preliminary survey outline. Here are some of the numerous questions that the prospective beginner often finds puzzling:

How much of an establishment shall I maintain? How shall it be departmentized? How extensive shall each department be and how much capital will I require to start and sustain such a plant? How much floor space will I need? How much for rent and general overhead? What book-keeping system? How many cars will I have to sell a year and how much must be the volume of each department in order to produce a total volume capable of giving me a fair net profit?

The foregoing list could be continued at length. His capacity as a business man and his automotive experience will have much to do with the ease of the prospective dealer's replies. But here is a practical way to obtain satisfactory answers for many such questions.

Pick out a list of dealers handling that same make of car in towns easily reached but out of your competitive area. Then jump in your car and visit them. Study their plans of business. Get their suggestions. If you can find one or more of about your feasible size who are making good you likely can obtain a good working model for your own organization, profiting by the experience of others.

After completing this round, providing all has gone well, the prospector will be about ready to assume the responsibilities of a franchise, but before opening the doors he should arrange for a trip to the factory. There—will be found a source of much golden information and assistance.

Yes—all this will take time, energy, application and some money—but as said in the beginning it is much safer to look well before you leap. Give us more thorough preliminary surveying and we will have a much lower mortality rate.

What It Costs the Dealer Before He Gets Any Profit

Important studies in the new car dealer's cost of doing business have been made by the National Automobile Dealers' Association. At the 1926 convention of the association comparative figures for three years were presented in an address by A. R. Kroh, sales promotional advisor.

In those three years, according to the N. A. D. A. figures, the dealer's average net profit has increased from 3 per cent to 3.6 per cent of his total sales volume. The N. A. D. A. objective for all car dealers is 5 per cent net.

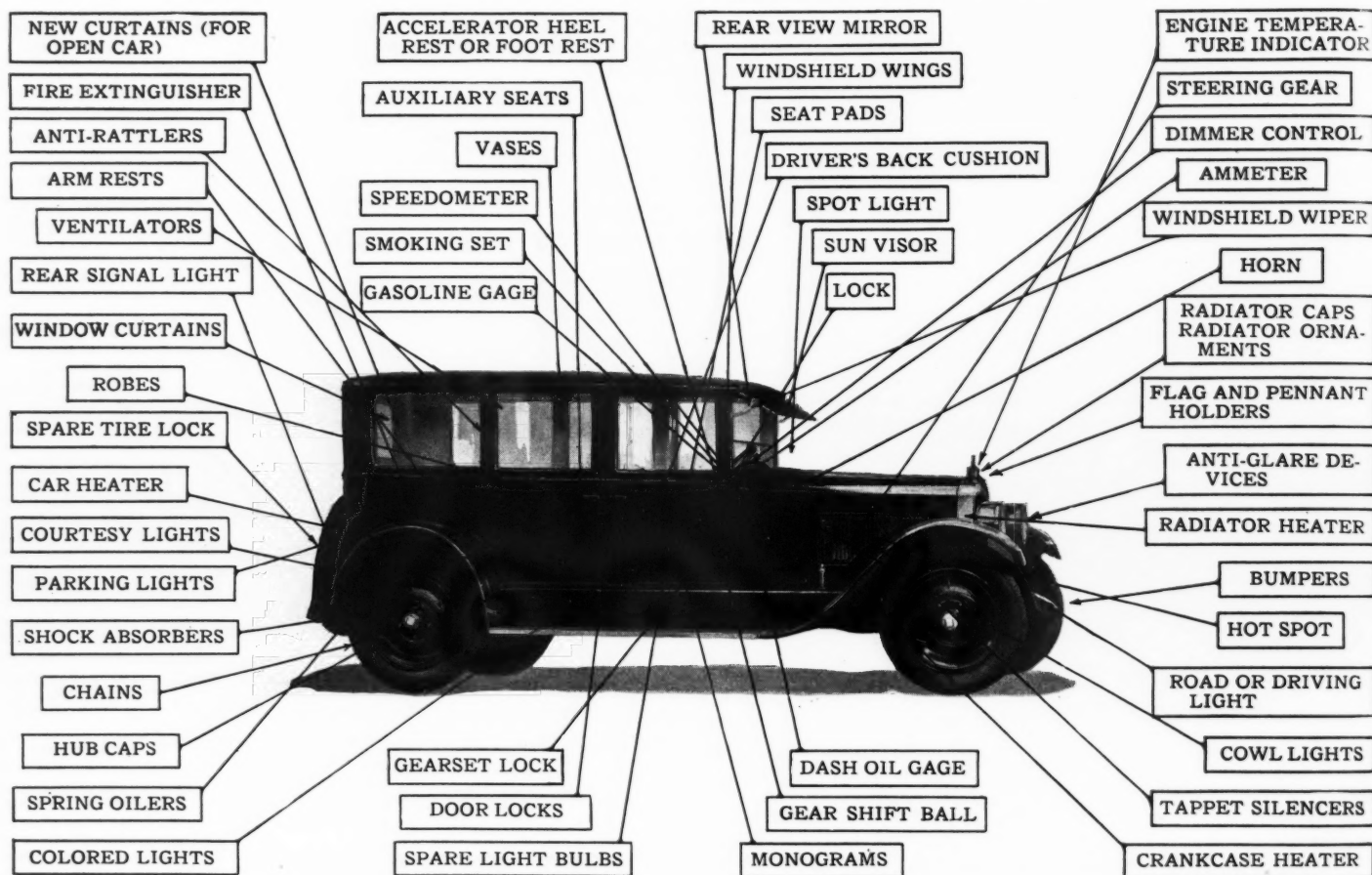
Considering that the average car dealer has 25 cents out of every dollar he gets from new car sales with which to pay his expenses and show a profit, the other 75 cents

being invested in merchandise, Mr. Kroh presented the following figures:

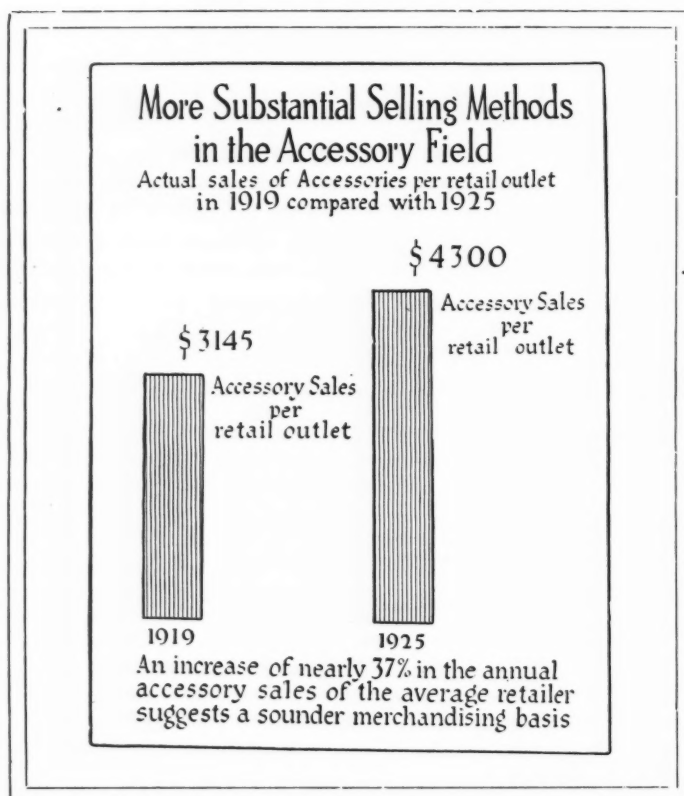
	1923 cents	1924 cents	1925 cents
Used car losses.....	9	8.2	7.8
Sales commissions and salaries.....	5	5	5
General and administrative office salaries, interest, etc.....	3	3.2	3.3
Rent, heat, light, etc.....	2	2	2.1
Advertising and demonstration.....	2	2.2	2.2
Taxes, insurance, depreciation, new car policy adjustments.....	1	1	1
Average net profit on sales volume.....	3	3.4	3.6
Total	25	25	25

This is only one of the profitable services for dealers carried on by the N. A. D. A., whose headquarters are at 320 N. Grand avenue, St. Louis, Mo.

Five Big Accessory Salesmen Are Safety,



Some Things to Sell for Safety, Comfort and Decoration



ACCESSORY sales are making an important contribution to the automotive merchant's net profit. This business has grown in half a dozen years from a volume of about \$145,000,000 to nearly a third of a billion dollars. These figures show the retail sales by years from 1920 to 1925 and the estimated sales for 1926:

1920	\$145,250,000	1923	\$210,400,000
1921	146,750,000	1924	235,100,000
1922	170,500,000	1925	280,000,000
1926			305,000,000

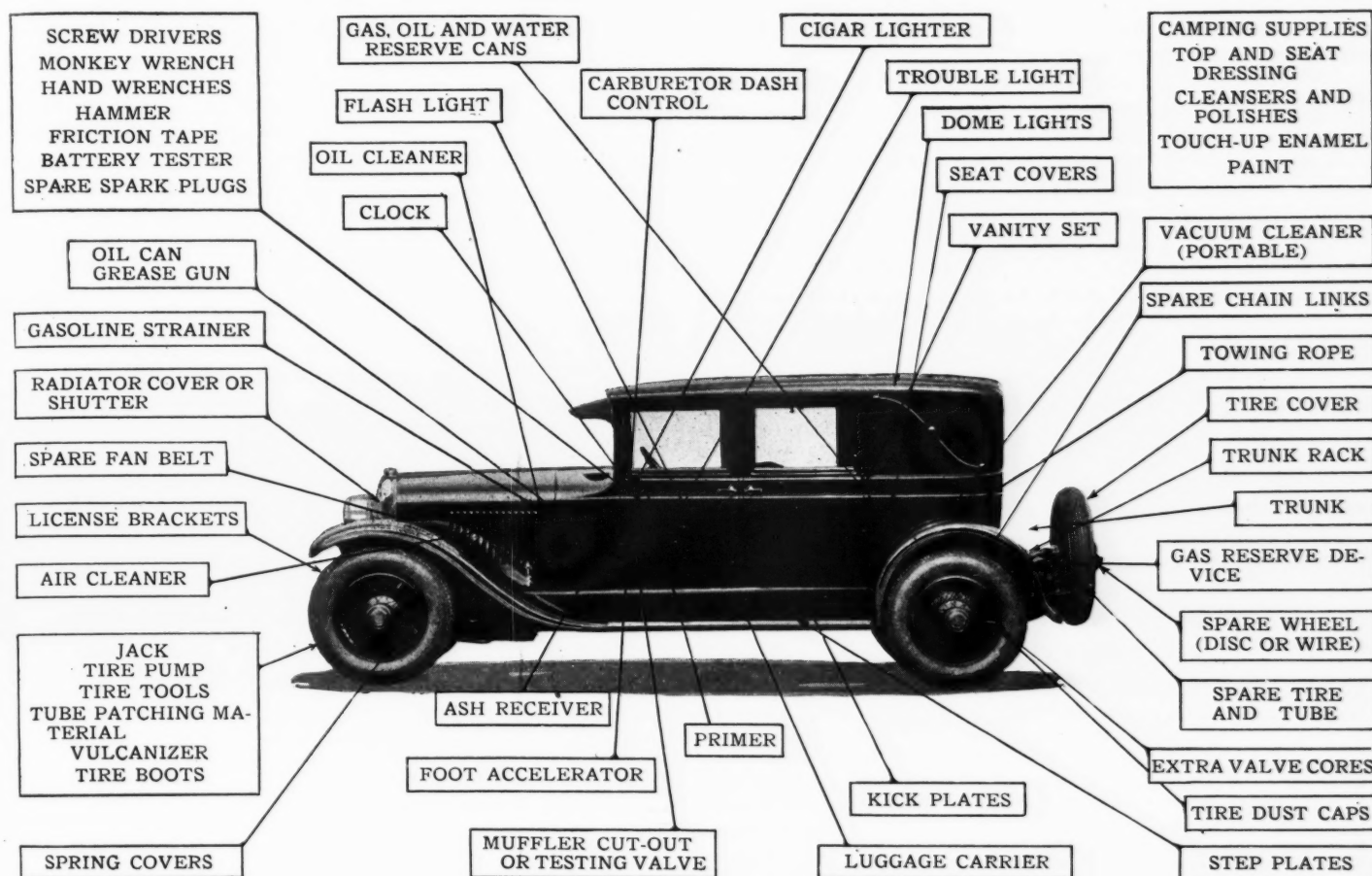
It will be noticed that there has been a steady growth each succeeding year. The average sales of accessories per dealer have been increasing and car dealers are coming to constitute an increasingly large proportion of retail accessory outlets, according to information compiled by James H. Collins of the Commercial Research Department of the Chilton Class Journal Co. This is shown by the following figures:

	1919	1925
Retail accessory dealers in U. S.	43,409	63,002
Per cent who are car dealers	39%	51%
Average sales per dealer	\$3,145	\$4,300

Although many passenger car models are now supplied by the manufacturer with a more or less full list of equipment, the fact remains that the large production makes and styles are still lacking much accessory equipment which the dealer has the opportunity to provide.

Passenger cars on the market today constitute 658 body styles. The following tabulation shows the number of body types furnished by the manufacturer WITHOUT certain equipment that is considered practically necessary:

Comfort, Convenience, Economy, Decoration



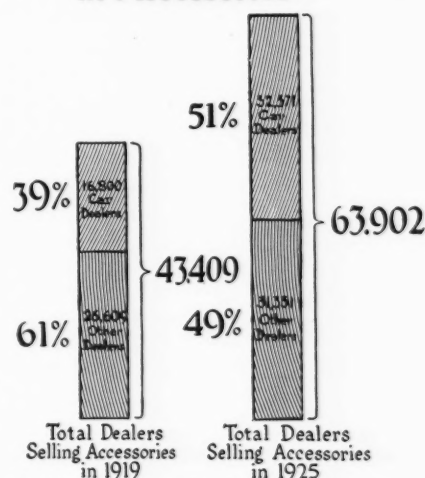
Some Things to Sell for Convenience and Economy

Article	No. Body styles Not Having
Spare wheel (only styles counted having disc or wire wheels).....	55
Spare tire.....	543
Front bumper.....	359
Rear bumper.....	455
Shock absorbers.....	285
Automatic windshield wiper.....	121
Trunk rack.....	523
Trunk.....	581
Sun visor.....	286
Windshield wings.....	593
Car heater.....	547
Cowl ventilator.....	162
Rear view mirror.....	133
Heat indicator.....	357
Spot light.....	615
Rear traffic signal.....	226
Dash gasoline gage.....	319
Cigar lighter.....	449
Cowl lights.....	287
Vanity set.....	470
Smoking set.....	477
Clock.....	268
Ignition lock.....	268
Steering gear lock.....	582
Door lock.....	290
Spare tire lock.....	391
Gearset lock.....	338

Thousands of good dealers know the profit possibilities from selling good accessories.

They know that many so-called accessories are practically necessary for the *Safe* operation of the automobile, others are needed to provide comfort for the occupants, and that still others find their sales appeal in the convenience or economy they provide in the operation of the car, or the decorative touch they give to it. All these are powerful sales appeals and can be used successfully by the dealer.

The Car Dealers' Growing Interest in Accessories



While the number of trade units selling accessories has increased 47% in 6 years the number of car dealers interested in accessories has increased nearly 100%

THE BIG ROAD—1926 MODEL

(Continued from page 15)

of the 25,000,000 motor vehicles in the world, the United States has about 81 per cent. Traffic counts have shown that at peak periods, from 1,200 to 2,000 cars will pass a certain point every hour.

In order to care for this congestion in and near great cities, super-highways have been and are being constructed. The famous old Boston Post Road is an outstanding example. It has been rebuilt and made wide enough for four lanes of travel.

Engineers are advocating high speed roads between cities. One plan, as outlined by its promoter, would build a road between Chicago and Milwaukee with a center track on which traffic could move at a speed as great as 90 miles an hour. Other lanes near the edge would care for slower travel.

The peak of highway construction will be reached in 1926 when a total estimated sum of \$1,030,286,948 will be available for road building and maintenance purposes. Of this amount, 58 per cent is to be expended by state highway departments and the other 42 per cent is for Federal aid projects.

The 1926 program provides for the construction of 6,751 miles of concrete, brick and asphalt paving; 14,300 miles of sand-clay, gravel and macadam and 8,145 miles of improved earth roads. In addition to this, the states will maintain 234,582 miles of non-Federal-aid highways.

Total expenditure by counties and local units for both maintenance and construction is placed at \$431,696,000, which is \$31,000,000 less than the similar estimates made a year ago. This, however, is more than offset by the advance of more than \$58,000,000 in funds estimated as available to the state highway commissions. This demonstrates the trend, observable in recent years, to place control of all important state roads in the hands of state highway departments.

It is estimated that for every mile of improved road in the United States there are 40 automobiles. Statistics show that if all the automobiles, trucks and buses manufactured in 1925 were placed in a line on a road equal to the total number of miles of highway improved during the same period, there would be but five feet be-

(Continued on page 68)

U. S. Has 473,925 Miles of Surfaced Highways				A Billion Dollars for Roads in 1926		License Fees and Gasoline Taxes Paid by Motorists	
State	Road Mileage	Total Surfaced Road Mileage	Miles Improved Roads Completed and Under Construction Under Federal Aid, Jan. 31, 1926	Probable Expenditure by State Highway Departments	Probable Expenditure by Local Authorities	Gross Receipts From License Fees, 1925	Gross Receipts From Gasoline Tax, 1925
Alabama	56,551	12,983.7	1,441.1	\$ 9,900,000	\$ 12,000,000	\$ 2,511,129	\$ 2,140,802
Arizona	21,400	3,153.5	794.7	4,200,000	630,000	405,592	855,951
Arkansas	71,960	6,028.0	1,610.0	6,500,000	9,000,000	3,150,000	2,950,360
California	70,000	15,334.6	1,023.2	14,000,000	23,000,000	7,816,298	14,465,889
Colorado	48,000	8,791.5	927.0	4,550,000	5,000,000	1,430,299	1,960,946
Connecticut	12,000	2,424.1	144.1	7,785,289	2,500,000	5,644,247	1,908,809
Delaware	3,800	709.6	142.1	2,930,000	900,000	680,700	342,081
Florida	27,548	8,998.9	391.8	14,000,152	18,000,000	3,645,628	7,657,507
Georgia	80,892	19,338.7	2,351.5	7,324,750	13,000,000	3,010,415	4,418,824
Idaho	40,200	11,015.5	830.6	2,837,000	1,500,000	1,192,587	895,443
Illinois	96,771	14,204.9	1,553.6	46,200,000	20,000,000	12,969,754	None
Indiana	70,946	39,935.7	946.1	13,200,000	40,000,000	4,649,663	7,653,049
Iowa	109,113	4,774.0	2,510.2	13,584,108	16,000,000	9,741,103	4,860,000
Kansas	124,143	1,643.7	1,565.6	9,072,000	10,000,000	4,610,090	2,905,194
Kentucky	53,000	17,150.3	983.1	12,000,000	10,000,000	3,780,062	3,041,560
Louisiana	40,000	4,746.9	1,156.9	9,250,000	7,000,000	3,400,045	2,339,543
Maine	23,104	3,974.1	357.4	8,983,400	3,900,000	2,192,135	1,268,348
Maryland	14,810	4,399.0	435.4	7,116,398	3,200,000	2,576,301	1,977,036
Massachusetts	20,525	7,330.6	401.4	13,000,000	12,000,000	9,843,901	None
Michigan	75,000	21,269.3	1,166.3	11,500,000	22,000,000	14,526,002	8,236,078
Minnesota	103,050	22,707.1	3,640.6	21,500,000	6,500,000	9,744,834	3,863,940
Mississippi	53,000	9,397.8	1,388.1	6,250,000	6,000,000	1,530,000	2,494,274
Missouri	111,510	9,725.0	2,007.8	28,076,000	12,000,000	7,267,098	4,159,115
Montana	67,100	1,001.4	1,168.0	1,350,000	1,000,000	915,253	659,411
Nebraska	80,272	1,261.3	3,770.5	6,500,000	8,500,000	3,936,458	2,193,802
Nevada	22,000	1,030.6	850.8	1,670,000	400,000	209,197	318,705
New Hampshire	14,112	1,254.0	255.2	3,550,000	1,500,000	1,736,094	707,072
New Jersey	17,120	7,486.5	310.6	22,900,000	8,300,000	10,515,323	None
New Mexico	47,607	2,730.5	1,527.2	3,555,553	200,000	457,874	537,356
New York	81,873	24,714.8	1,628.7	35,750,000	26,641,000	25,506,245	None
North Carolina	60,000	18,229.3	1,389.5	16,000,000	10,000,000	8,369,844	6,082,378
North Dakota	106,202	1,219.4	2,615.0	5,450,000	3,500,000	1,083,573	634,416
Ohio	84,497	33,710.5	1,627.1	25,500,000	20,000,000	13,147,231	9,009,950
Oklahoma	112,698	1,780.3	1,255.5	10,000,000	12,000,000	4,576,572	5,143,517
Oregon	41,826	10,195.3	1,014.1	7,000,000	7,000,000	5,370,202	2,909,095
Pennsylvania	90,000	16,190.1	1,594.9	63,550,000	12,500,000	21,926,972	8,352,798
Rhode Island	2,368	656.5	111.0	3,790,000	875,000	1,863,956	318,357
South Carolina	52,318	9,139.5	1,639.7	5,540,000	2,500,000	2,366,076	3,865,403
South Dakota	115,390	2,401.6	2,599.9	3,350,000	5,250,000	2,445,112	1,847,598
Tennessee	65,204	12,455.7	937.3	18,000,000	9,000,000	3,060,948	3,407,886
Texas	182,816	19,589.4	5,616.0	28,000,000	16,000,000	13,477,931	4,641,784
Utah	24,057	2,964.1	685.5	3,640,798	500,000	554,235	1,009,966
Vermont	14,900	4,484.9	157.5	3,530,000	700,000	1,497,146	502,272
Virginia	53,338	7,602.9	1,112.7	10,285,500	2,600,000	4,300,950	3,701,951
Washington	43,428	16,662.2	680.4	9,000,000	11,000,000	4,980,026	3,020,812
West Virginia	31,629	1,690.0	525.2	13,750,000	6,000,000	3,354,247	2,186,739
Wisconsin	78,800	24,491.7	1,778.3	20,970,000	10,700,000	7,896,210	4,031,676
Wyoming	46,320	827.0	1,293.6	2,200,000	900,000	482,857	456,297
Totals	2,862,198	473,925.0	63,232.9	\$598,590,948	\$431,696,000	\$260,328,414	\$145,933,900

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MOTOR AGE

1926

FLAT RATE MANUAL

10,000 Suggested Prices, Covering
Maintenance Operations on 48
Makes and Models of Cars

Compiled by B. M. IKERT

THE suggested flat rate prices appearing in this manual are given as base prices from which charges can be derived whereby a shop can perform the operations at a fair profit and at the same time just cost to the customer.

Under no circumstances are the prices "standardized charges" applicable all over the country. It is very difficult to establish a system of standard prices for repair work because of varying labor conditions, shop equipment, and inability, very often, to get good mechanics. It is, therefore, necessary to provide some latitude in the application of these prices so they may conform more closely to the local situation.

Many of the flat rate prices are given exactly as compiled by the car manufacturer, but here again it must be borne in mind that some such prices have been based on doing the operations with special equipment provided by the car manufacturer for authorized service stations.

Some of the prices are those successfully used by dealers in various parts of the country. This is especially true of cars whose makers have not as yet compiled flat rate operation prices.

This will help to clear up apparent misunderstandings that arise from the fact that an operation on one make of car may seem high priced compared to the same operation on another car where practically the same structural conditions exist.

Except in a few instances the prices are for labor only and where no special mention is made as to inclusion of parts and the price seems high, it is more than likely that parts are included. In working out these prices the labor charges are based on the hourly rate of \$1.50. This

was done because this rate has been found profitable in many parts of the country. This hourly rate, however, is low for other sections, \$1.60 being more nearly in keeping with modern conditions.

However, any shop can figure its own flat rate prices to conform to any desired hourly rate as follows:

When using a \$1 per hour labor charge multiply the prices printed in the manual by .67. When using a \$1.25 labor charge multiply by .87 and when selling labor at a rate of \$2.00 per hour multiply by 1.33.

It is strongly urged that attention be paid to correctly interpreting the operations. This will help to understand the charges and will explain why certain operations that seem trivial run up in cost. For example, renewing a front main bearing, such as operation 29-A, requires practically the same amount of work as operation 26-A.

It has not been possible to list some of the operations confined to certain units. Thus, in operation 9-J, that of renewing clutch gear assembly, the work is in some cases part of the transmission work. Also, where blanks appear it is

often caused by the fact that no such operation is applicable. Thus, a blank space under the operation of adjusting a front end chain may be explained by the fact that the chain has an automatic take-up and requires no adjustment.

Prices for operation 7-Q, renewing splashers only, appear high because it is necessary to remove the running board also.

The word "renew" is taken to mean the removal of the part or unit and installation of a new one. It also means that all hand or machine work is included in the price of the operation.

Authorized Flat Rate Schedules

ACCORDING to the latest available information, individual factory flat rate systems for the use of authorized dealers and service stations have been compiled for the following makes of cars:

Buick	Ford	Oldsmobile
Cadillac	Franklin	Overland
Chandler	Hudson	Packard
Chevrolet	Hupmobile	Paige
Chrysler	Jewett	Reo
Cleveland	Lincoln	Rickenbacker
Dodge Brothers	Marmon	Star
Durant	Nash	Studebaker
Essex	Oakland	Velie

Cars for which manufacturers are known to have suggested flat rate schedules in process of compilation are:

Ajax	Flint	Stutz
Auburn	Pierce Arrow	

In addition to listing flat rate maintenance prices on all the above named cars, this MOTOR AGE Flat Rate Manual gives many repair prices on Case, Davis, Diana, Elcar, Gardner, Jordan, Kissel, Moon, Peerless, Pontiac, Stearns-Knight, Wills Ste. Claire and Willys-Knight.

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Motor Age Flat Rate Manual

Cylinder Operations—Group A

Group A—Cylinders, crankcase, crankshaft, connecting rods and pistons.

- 1-A. Remove and strip one cylinder block for regrinding.
- 2-A. Remove, replace and strip all blocks for regrinding.
- 3-A. Remove and replace one cylinder head or gasket.
- 4-A. Remove and replace all cylinder heads.
- 5-A. Inspect internal condition of engine, including removal and replacing of cylinder heads, oil pan, rod and piston assemblies, inspect and micrometer cylinders, pistons, etc., and reassemble.
- 6-A. Remove and replace rod assembly for inspection. Includes operations 4-A also 1-F.
- 7-A. Renew set piston rings and align rods.

- 8-A. Renew set of rings after 5-A and 6-A.
- 9-A. Renew rings, one piston.
- 10-A. Same as 8-A after 6-A.
- 11-A. Renew one piston and ring and pin after 6-A.
- 12-A. Renew one piston pin after 6-A.
- 13-A. Renew pin and bushings. One piston after 6-A.
- 14-A. Renew all rings and pins after 6-A.
- 15-A. Inspect piston pin after 6-A.
- 16-A. Ream bushing, install oversize pin, after rod removal and replace each.
- 17-A. Take up lower rod bearings.
- 18-A. Take up rods, pan off.
- 19-A. Take up blade rods only after 1-F.
- 20-A. Renew one rod bearing, take up others.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	1-A	2-A	3-A	4-A	5-A	6-A	7-A	8-A	9-A	10-A	11-A	12-A	13-A	14-A	15-A	16-A	17-A	18-A	19-A	20-A
Ajax			2.00		6.25	4.90	4.50	3.00				1.00					6.50			
Auburn 6-66			3.00	3.00	9.75	6.25	4.50	3.00				.75					8.00			
Buick	12.00	12.00	5.50	5.50	7.25	4.50	11.50	2.90	3.00	.75	2.40	1.00	1.00	9.25		1.00	8.50	5.00		11.00
Cadillac			1.50	1.50	15.75	12.75	16.75	8.00	5.75	.75	2.50	1.00	2.25	14.75	.50	1.00	5.00	3.00	2.60	10.75
Case Y			3.00		11.00	8.50	12.50	6.00				1.25					11.00			
Chandler	48.00	48.00	1.60	2.40	12.80	5.60	8.00		4.00		4.80	4.00	4.00	12.00	.75	4.00	7.20			9.60
Chevrolet	18.00	18.00	1.50	1.50	4.75	4.25	5.50	1.85	4.25	.45	1.25	1.25		3.75	.50	.50	3.75	1.25		5.75
Chrysler	25.00	25.00	1.75	1.75	7.25	6.00	12.50	6.00	4.25	1.00	5.50	.75		10.75	.50					
Cleveland	10.00		2.00		12.00	4.00	7.20	1.60	4.00	.80	1.80	1.00	1.60	9.60		1.00	5.00	4.00		9.00
Davis 92	15.00	25.00	2.25	1.75	7.25	6.00	12.50	6.00	4.25	1.00				13.50		9.00	4.50	3.00		6.00
Diana			3.50	3.50	12.75	10.00	16.75	9.00				1.50					14.00			
Dodge Brothers	24.00	24.00	1.50	1.50	7.00	6.25	12.50	6.25	7.90	1.25	3.25		1.25	6.25	.75	1.25	7.50	5.00		13.50
Durant		20.00	2.00	2.00	7.00	6.00	1.80	8.80	6.45	.45	1.15	.60		4.20		.50	4.50	3.00		6.50
Elcar 6-67			3.00	3.00	9.00	6.25	4.50	3.00				.75					8.00			
Essex 6		4.50		1.50	10.50	7.50	9.00	2.30	5.30	2.30	1.20	.80	.80	4.50	.40	.80	6.00	4.50		8.30
Ford	27.00	27.00	1.00		12.00		6.50	3.00	4.50	1.50	.90		1.50	5.25		.90	5.00	3.00		6.75
*Franklin 11	3.08	12.00			49.90	13.43	27.90	15.90	5.73	2.65	7.30	1.55		25.20	.75	1.55	14.85	5.40		19.99
Gardner 6			3.00	3.00	9.50	6.00	4.50	3.00				.75					7.00			
Hudson		4.50		1.50	15.00	14.30	13.50	2.30	9.80	2.30	1.20	.80	.80	4.50	.40	.80	6.00	4.50		9.80
Hupmobile 4	24.00	24.00	1.50	1.50	7.25	6.50	8.25	4.75	3.50	1.00	3.50	1.25		7.75		1.25	3.75	1.25		5.25
Hupmobile 6			1.50	1.50	4.75		14.00	3.00									6.00	4.75		
Hupmobile 8			2.70		6.15				3.85		3.85	3.85								4.50
Jewett (New Day)		36.00	1.75	1.75	6.50	2.00	10.00		3.90		4.75	2.25	2.25	5.50	.75		4.00	2.25		
Jordan 8	18.00	20.00	3.00	3.00	13.00	9.50	20.00	9.50	11.75	1.00	3.00	1.50	2.00	21.50	.75	1.50	14.00	12.50		18.00
	1-A	2-A	3-A	4-A	5-A	6-A	7-A	8-A	9-A	10-A	11-A	12-A	13-A	14-A	15-A	16-A	17-A	18-A	19-A	20-A
Kissel 55			3.00		12.00	8.00	12.50	6.00				1.50					10.50			
Lincoln	22.00	42.00	1.60	3.10	17.00	13.50	14.00	5.00	4.50	.50	2.40	.60		11.00		.95			4.00	8.00
Marmon		21.10	7.60	8.75	21.00		27.45	15.50	11.95		7.60	2.00	6.35	27.40			7.20	5.40		
Moon A	15.00	15.00	3.25	3.25	9.50	6.75	15.00	5.00	4.50	.75	2.75	.75		9.00		.75	8.00	6.00		12.00
Nash Adv.	34.00	34.00	3.25	3.25	10.75	8.50	15.75	6.75	7.50	1.40	4.25	1.25	1.50	12.75	.75	1.50	12.50	9.00		16.25
Oakland	16.50	16.50	1.75	1.75	7.50	5.00	5.25	3.00	2.15	.50	1.00	.50		5.40		.50	3.00	1.65		4.00
Oldsmobile	30.00		1.00	1.00	6.25	4.75	4.50	3.00	3.00	.50	2.50	.50	1.25	7.50	.50	.75	6.50	4.00		7.75
Overland 91-92	18.00	18.00	1.50	1.50	6.00	4.25	6.75	3.00	6.00	.75	1.25	.50		5.25		.50	4.50	2.25		6.00
Packard 6	12.00		3.00		12.00	9.75	15.75	6.00	7.20	1.20	1.50	1.50	1.50	9.00		1.50	15.00	12.00		
Packard 8	14.25		3.75		14.25	11.25	18.00	6.75	8.70	1.20	1.50	1.50	1.35	12.00		1.50	18.00	14.75		
Paige 24-26		22.00	1.75	1.75	6.50	2.00	9.00		3.50		4.50	2.25	2.25	5.50	1.50		3.75	2.00		
Peerless 8	6.00	10.00			10.50	8.50	17.00	8.00	5.75	1.00	2.60	1.00	2.00	16.75		1.00	11.00	6.75		13.75
Pierce Arrow 80				4.00	11.00	9.75	20.00	7.50	7.50	1.50	3.25	1.50		12.75			16.00	12.50		18.25
Pontiac			.75	1.50	7.50	5.25	5.25	3.00				.50					4.00			
*Reo	28.00	28.00	3.50		9.50	6.50	14.75	6.00		1.00	10.50	2.00		11.75	.75	.85	14.00	11.00		23.50
Rickenbacker 6	26.00	26.00	3.00	3.00	7.00	7.00	12.50	3.00	3.00	.60	1.50	1.65	1.65	9.00		1.50	6.75	4.75		10.50
Star 4		17.00	1.50	1.50	6.75	4.25	1.80	6.05	4.20	.45	1.15		1.00	5.80		.50	4.15	2.65		6.75
Star 6		20.00	2.00	2.00	6.00	5.00	2.70	7.75	5.45	.45	1.15		1.00	8.70		.50	4.50	3.75		6.75
Stearns-Knight			3.25	3.25	10.50	6.50			5.50								12.50	6.75		
Studebaker Spe. Big 6	15.00	15.00	3.00	3.00	8.75	7.75	12.00	7.00	4.50	1.20	3.80	1.50	2.50	14.75		1.50	9.50	6.75		12.00
Studebaker Stand	30.00	30.00	3.00	3.00	8.75	7.75	12.00	7.00	4.50	1.20	3.80	1.50	2.50	14.75		1.50	9.50	6.75		12.00
Velle 60	22.00	22.00	2.75	2.75	5.00	4.00	5.50	2.25	4.50	.50	1.40	1.00	2.50	6.00		1.00	4.75	3.00		9.00
Wills St. Claire 6			3.00	3.00	10.25	8.00			6.00								8.00	6.50		
Willys Knight			3.00	6.75	10.50	9.00	12.00	2.50	5.50	.50	3.00	1.00	1.75	9.50		.75	9.00	7.00		
	1-A	2-A	3-A	4-A	5-A	6-A	7-A	8-A	9-A	10-A	11-A	12-A	13-A	14-A	15-A	16-A	17-A	18-A	19-A	20-A

*Franklin and Reo prices include necessary materials.

†Not necessary to remove cylinder head.

Motor Age Flat Rate Manual

Cylinder Operations—Group A

- | | |
|---|--|
| 21-A. Renew one rod bearing after 1-F and 3-A. | 29-A. Renew front main only. |
| 22-A. Renew all rod bearings after 27-A. | 30-A. Renew one main after 27-A. |
| 23-A. Main and rod bearings, all—take up after pan and head removal—remove and replace. | 31-A. Renew shaft, use old bushings. |
| 24-A. Align all rod assemblies after rod removal and replace. | 32-A. Same as 31-A and 27-A. |
| 25-A. Same as 24-A, one rod only. | 33-A. Renew one main bearing after 1-F. |
| 26-A. Renew all main bearings 1-T, incl. | 34-A. Renew all mains, interchangeable type after 1-F. |
| 27-A. Remove, dismantle, inspect and reinstall engine assembly. | 35-A. Burn in all main bearings after aligning, engine brought in. |
| 28-A. Same as 26-A and 27-A. | 36-A. Same as 34-A plus rod bearings. |
| | 37-A. Take out crankshaft end play. |
| | 38-A. Renew one cylinder, 40-A, incl. |
| | 39-A. Renew all cylinders, 40-A, incl. |
| | 40-A. Fit piston assembly, cyl. out. |

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	21-A	22-A	23-A	24-A	25-A	26-A	27-A	28-A	29-A	30-A	31-A	32-A	33-A	34-A	35-A	36-A	37-A	38-A	39-A	40-A
Ajax			7.50																	
Auburn 6-66			12.50																	
Buick	4.25	20.00	11.00	1.25	.35	58.00	31.00	32.50	35.00	7.50	56.00	31.00							30.00	1.40
Cadillac	6.75	22.50	13.20	2.25	.40								14.75	20.00				27.75	42.00	3.50
Case Y			16.25																	
Chandler	5.50	16.00	19.20	12.80		56.00	12.80		56.00		40.00		56.00				24.00		48.00	
Chevrolet	1.75	4.25	7.00	1.00	.25	28.00	22.00	3.00		1.25	26.00	3.00			2.50	5.00		25.00	25.00	1.50
Chrysler	2.75	7.00		3.75	.50	32.50		10.00	30.00	3.25		9.50						47.00	47.00	2.00
Cleveland	1.00	9.60	10.60	1.00	.40	40.00			24.00	8.00	33.66	7.00					4.00		19.20	1.60
Davis 92	4.50		12.00	6.00		76.00	39.00		54.00											
Diana			21.75																	
Dodge Brothers	2.75	9.00	8.50	2.00	.45	44.00		9.25	36.00	3.00	45.00	11.25						74.00	74.00	3.00
Durant	2.00	8.00	8.00	2.50	.50	28.50	27.50	42.50	19.00	5.00	28.80	42.50							37.50	.50
Elcar 6-67			16.50																	
Essex 6	2.30	12.00	15.00	2.30	.40															2.30
Ford	1.50	4.00		1.25	.30	19.00									3.50	5.50		14.00	14.00	1.25
*Franklin 11	2.96	17.76	10.15			82.75	49.90	32.85	6.33		186.15	146.25					7.80	38.36	22.68	7.30
Gardner 6			12.00																	
Hudson	2.30	12.00	16.50	2.30	.40															2.70
Hupmobile 4	2.50	5.75	6.25	1.50	.40	48.00	24.00	23.50		11.00	40.00									3.00
Hupmobile 6			7.50	3.75	.40												4.50			
Hupmobile 8	1.50		10.50		.40												4.95			
Jewett (New Day)	1.75	12.50	6.50	1.20	.40												4.50		44.00	1.25
Jordan 8	4.75	36.00	21.00	3.75	.50	100.00	55.00	50.00	80.00	7.75	72.00							36.50	36.50	3.00
	21-A	22-A	23-A	24-A	25-A	26-A	27-A	28-A	29-A	30-A	31-A	32-A	33-A	34-A	35-A	36-A	37-A	38-A	39-A	40-A
Kissel 55			16.75																	
Lincoln	2.35	6.00	17.50	5.00	.75	45.00		20.00		6.00	42.00							30.00	50.00	1.25
Marmon			15.10			74.00	37.75		41.80	17.05	74.00									
Moon A	4.50	16.00	13.00	2.25	.75	65.00	40.00	35.00	60.00									22.50	22.50	2.50
Nash Adv.	4.75	26.00	18.75	5.75	1.00							6.25		15.00						3.00
Oakland	1.75	9.00	5.20	1.75	.30		26.00	3.00		3.75	14.25		4.00	4.00				12.00	12.00	1.25
Oldsmobile	2.00		7.50	5.00	1.25	10.75	34.00		7.50	1.25			1.50	6.50			4.50	33.00		.75
Overland 91-92	2.25	8.00	6.00	1.25	.40	25.50	21.00	20.00	24.00	8.00	24.00	18.00					6.00	34.00	34.00	1.25
Packard 6	4.50	12.75	25.50			67.50	45.00	90.00	66.00	21.00			63.00	87.50						1.50
Packard 8	4.50	15.75	32.25			72.00	52.50	105.00	76.50	24.00			72.75	101.25						1.50
Paige 24-26	1.75	12.00	6.75	1.20	.40												4.50		30.00	1.25
Peerless 8	3.00	20.00	12.00	3.50	.50	40.00	28.00	24.00			38.00	20.00					15.00		30.00	3.00
Pierce Arrow 80	4.50	25.00	25.00	5.75	1.25	65.00	55.00		6.00									58.00	58.00	2.00
Pontiac			6.00																	
*Reo	15.00	56.00	15.00	2.75	.50	82.00	28.00										12.50	310.00	310.00	3.75
Rickenbacker 6	4.25	18.00	10.00			46.00	21.00		36.00		32.00						5.00			1.50
Star 4	1.50	6.00	4.80	2.50	.50	24.50	17.00	29.00	15.10	4.00	24.40	29.00					4.80		23.00	.50
Star 6	1.50	9.00	7.25	3.50	.50	30.50	24.00	40.00	17.50	4.00	30.70	40.00					4.80		30.00	.50
Stearns-Knight			15.75	3.00	.50															1.75
Studebaker Sp. & Bl	4.00	20.00	13.75	2.50	.50	65.00	35.00	32.00	60.00	7.50	60.00						8.50	44.00	44.00	3.00
Studebaker Stand.	4.00	20.00	13.75	2.50	.50	65.00	35.00	32.00	60.00	7.50	60.00						8.50	44.00	44.00	3.00
Vellie 60	2.50	12.00	6.00	1.50	.75	38.00	20.00	18.00	24.00	5.00	32.00						3.75	50.00	50.00	1.30
Wills St. Claire			14.50	2.50	.40															1.50
Willys Knight	4.50	12.50	10.75			32.00	22.00				46.00						9.00			1.50

*Franklin and Reo prices include necessary materials.

†Chandler—27-A Not necessary to remove engine.

‡Marmon—30-A Price applies to center bearing.

\$Franklin—31-A Reground shaft in place of new, \$98.50;

32-A Reground shaft, \$48.65; 38-A Reground cylinder with piston, \$15.88; 39-A Reground cylinders with pistons, \$88.30; 26-A Includes rod bearings.

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Cylinder and Valve Operations

- 41-A. Fit all pistons, cyl. out.
- 42-A. Hone or lap one cylinder, remove not more than .004 and fit oversize pin and piston assembly.
- 43-A. Same as 42-A when cylinder is out.
- 44-A. Renew crankcase, upper half.
- 45-A. True up crankshaft journal and pins by regrinding when shaft is out.
- 46-A. Stop oil leak, rear main bearing.
- 47-A. Stop oil leak, front end crankshaft.
- 48-A. Remove and replace engine front gear cover, 5-C incl.
- 49-A. Remove and replace flywheel assembly.
- 50-A. Remove and replace flywheel after 2-J.
- 51-A. Take up all bearings, renew pins and rings and timing chain or gears.

Group B—Camshaft, valves, sleeves, etc.

- 1-B. Grind only valves after 4-A.
- 2-B. Renew all valve guides after 7-T.
- 3-B. Ream old valve guides after 7-T.
- 4-B. Adjust all tappets.
- 5-B. Rebush all rocker arms and renew rocker shaft.
- 6-B. Renew one cam follower and guide.
- 7-B. Renew all followers and guides, valves out.
- 8-B. Renew valve cover plate gaskets.
- 9-B. Overhaul cam followers, rockers and tappets.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	41-A	42-A	43-A	44-A	45-A	46-A	47-A	48-A	49-A	50-A	51-A	1-B	2-B	3-B	4-B	5-B	6-B	7-B	8-B	9-B
Ajax								3.50				3.50			1.50					
Auburn 6-66								5.00				4.15			1.25					
Buick	24.00		5.50	62.50	20.75			6.00			29.00	3.00	4.50		1.00	6.75	1.65	8.00		14.50
Cadillac	24.00		4.00	120.00	18.00			6.80	10.80	3.25	36.50	9.00	6.50		3.00	3.50	2.25	6.35		35.00
Case Y								5.50				3.50			1.75					
Chandler		16.00		64.00	64.00	8.00	8.00	6.40	19.20		41.60	14.40	4.80	8.00	1.20		1.60	8.00	.80	8.00
Chevrolet	4.75	6.85	3.00		18.00			2.25	6.00	.50	17.00	2.25		5.00	.75	2.00	.30	1.50		3.50
Chrysler	8.00	9.50	5.00		26.50			3.75	10.50	3.00		5.75	4.75		1.50		1.50	2.75		3.50
Cleveland	5.00	7.00	3.20	40.00	4.00	5.00	5.00	2.40	11.20	2.40	19.00	4.00	.80		.80	4.00	.80	3.20	.60	4.00
Davis 92		7.50				4.50	12.00	12.00	12.00	12.00	32.00	9.00	22.00	15.00					1.50	
Diana								10.25				3.75			2.00					
Dodge Brothers	9.25		4.50		18.00			7.75	21.50	15.00	32.10	3.00	9.00	9.00	1.25		1.50	6.50		8.00
Durant	2.00	7.50	3.00					4.00	4.50	.75	26.80	2.25			.90	2.00	1.90	5.40		8.00
Elcar 6-67								5.00				4.25			1.25					
Essex 6	10.50							4.90	7.50	1.50	27.00	3.80	4.50		1.20					
Ford	4.00	5.25	2.50					3.25	24.00		17.50	1.75		2.00					.65	
*Franklin 11	42.80	15.88	12.80	240.14	14.90		7.80	7.80	20.62	14.17	71.00	7.50	14.40		1.18	9.24	3.24	21.00		3.84
Gardner 6								5.00				4.00			1.25					
Hudson	12.00			75.00				4.90	7.50	1.50	31.50	4.50	4.50		1.20					
Hupmobile 4	10.75	6.25	4.25		18.50	7.00	2.25	4.25	6.75	2.25	16.75	5.25			.75		3.75	15.75	.75	17.75
Hupmobile 6								4.25	3.50		18.00	7.50			1.25				.75	
Hupmobile 8		11.45				6.75		7.20							1.50		3.75		.75	
Jewett (New Day)	7.50	11.00	1.00		4.75			4.00	9.75	1.75	11.50	4.50	2.50		1.25				1.50	
Jordan 8	24.00	10.50	5.75	108.00	28.00			10.75		3.00	50.00	4.50	6.25		2.00		2.50	4.00	.75	16.50
	41-A	42-A	43-A	44-A	45-A	46-A	47-A	48-A	49-A	50-A	51-A	1-B	2-B	3-B	4-B	5-B	6-B	7-B	8-B	9-B
Kissel 55								5.00				3.50			1.50					
Lincoln	8.75			100.00	21.00			6.00	15.00		37.00	11.00	7.00		4.50					37.00
†Marmon				191.25				3.50	24.50	19.00			8.05			20.60	19.85	80.35		
Moon A	2.00		5.00		22.00			5.00	7.00	2.00	30.00	4.00			2.50		6.50	10.00	.80	
Nash Adv.	15.00	12.75	5.00		22.00			5.25	8.00	1.75		5.75	2.00		.40		3.50		1.75	2.75
Oakland	5.25	5.00	1.50		19.00			2.50	3.50	1.00	20.00	4.00	2.25		.75	5.00	.75	1.50		5.00
Oldsmobile	3.00	7.00	4.50		75.00		.75	3.00	9.00	2.25	18.00	3.25	5.25		1.50		1.50	1.50	.50	
Overland 91-92	4.00				15.25			4.00	10.00	3.50	21.75	2.25	2.25		1.50		11.75	11.75		14.00
Packard 6	9.00			118.50	15.75			4.15	33.00	28.50		2.25			.90	5.10	.90	5.25	1.20	
Packard 8	12.00			151.50	13.80			4.65	37.50	33.00		2.75			1.50	5.30	105.00	6.00	1.20	
Palge 24-26	7.50	10.50	1.00		4.75			4.00	5.00	1.50	12.00	4.50	2.50		1.25				1.50	
Peerless 8	20.00	8.00	3.00		17.75			9.50	9.00	2.00	48.00	7.00		2.00				9.25	1.50	34.00
Pierce Arrow 80	11.50		5.75		22.50			10.25		3.00	44.00	5.00		1.50						
Pontiac								3.75				4.00			.75					
*Reo	20.00			146.00	20.50		5.00	9.50				8.75			1.25	9.50	4.00	36.75		
Rickenbacker 6	8.00				15.75			4.00	9.00	3.00		4.50	3.00		1.50					4.00
Star 4	2.00	6.50	2.50					4.00	4.50	.75	20.20	2.25	3.20		.80		1.50	3.60	.40	3.50
Star 6	3.00	6.50	2.50					4.50	4.50	.75	24.55	3.40	4.80		1.50		1.50	4.80	.60	4.75
Stearns-Knight								9.50												
Studebaker Sp.Blg 6	18.00	9.50	5.50	90.00	20.00			7.50	9.00	1.50	44.00	4.00	16.50	12.00	1.50		1.50	7.00		4.00
Studebaker Stand.	18.00	9.50	5.50		20.00			6.50	9.00	1.50	42.00	4.00	16.50	12.00	1.50		3.75	10.00		4.00
Vellie 60	7.00	8.00	4.00		23.00			2.00	5.75	1.00	25.00	3.50	4.50		1.00	4.00	1.25	5.00		7.50
Willis St. Claire 6								8.00	15.00	3.50		6.25			1.50					
Willys Knight	9.00				18.00															

*Franklin and Reo prices include necessary materials.
†Crankshaft in place.

†Marmon 49-A—Price includes installing ring gear on flywheel.

Motor Age Flat Rate Manual

Valve and Cooling System Operations

- | | |
|--|---|
| 10-B. Same as 9-B after 7-T. | 20-B. Renew all camshaft bearings after 17-B. |
| 11-B. Retime valves and ignition. | 21-B. Renew one inner sleeve. |
| 12-B. Adjust front end chain. | 22-B. Renew all inner sleeves. |
| 13-B. Renew front end chain 48-A, incl. | 23-B. Same as 21-B rod out and cylinder off. |
| 14-B. Renew chain after 48-A. | 24-B. Take up all sleeve rods. |
| 15-B. Renew front end gear after 48-A. | 25-B. Same as 24-B cylinder and pan off. |
| 16-B. Renew chain and sprocket after 48-A. | 26-B. Renew or tighten one junk ring. |
| 17-B. Remove and replace cam or eccentric shaft. | Group C—Fan, radiator, pump, pipes and hose |
| 18-B. Adjust cam shaft end thrust after 48-A. | 1-C. Renew fan bearing. |
| 19-B. Renew front camshaft bearing after 48-A. | 2-C. Renew fan belt. |
| | 3-C. Repack one water pump. |

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	10-B	11-B	12-B	13-B	14-B	15-B	16-B	17-B	18-B	19-B	20-B	21-B	22-B	23-B	24-B	25-B	26-B	1-C	2-C	3-C
Ajax																		.75		
Auburn 6-66																		.75		
Buick		7.50				7.00		6.25			5.00							1.80	.35	1.25
Cadillac	12.00		.50	12.50	5.00		5.00	42.00			3.00									3.00
Case Y			.50																1.00	
Chandler		8.00	.80	7.20			8.00		12.80	16.00	24.00							3.20	.80	1.60
Chevrolet	3.25	4.00				2.00	4.50												.50	.50
Chrysler	3.00	6.00		6.00	2.50		3.50	15.75		12.75									1.25	.75
Cleveland	4.00	4.00	.40	5.00	.80	7.20	2.40	5.00	.80	2.00								3.20	.60	.80
Davis 92	12.00		.75				12.00	27.00	12.00									4.50	.75	1.50
Diana			.75																.75	
Dodge Brothers	7.00	9.00	1.20	2.70	.75	2.50		12.75	1.50									2.25	.75	1.50
Durant	6.25	1.00				.40		6.00		1.25								1.20	.50	.50
Elcar 6-67																			.75	
Essex 6		6.00	1.20	6.00	1.50	3.00	9.00	.80	.80									1.50	.40	.80
Ford		4.50				24.00		6.50	7.00	.50	3.00							1.00	.35	
*Franklin 11		7.80	.85	14.20	6.40		22.05			6.54	10.44									
Gardner 6																			.75	
Hudson		6.00	1.20	6.00	1.50	6.80	3.00	12.00	.80	.80								1.50	.40	.80
Hupmobile 4	16.00	6.50	.50	6.00	1.50														.40	
Hupmobile 6			.50	6.00															.75	.50
Hupmobile 8		1.50	.40	3.00															.40	2.25
Jewett (New Day)		1.50	†3.50	4.25			.75	5.25										1.50	.40	1.50
Jordan 8	4.00	11.75	.75	12.50	2.00		4.50	18.75	12.00	34.00	48.75							1.50	1.25	.75
	10-B	11-B	12-B	13-B	14-B	15-B	16-B	17-B	18-B	19-B	20-B	21-B	22-B	23-B	24-B	25-B	26-B	1-C	2-C	3-C
Kissel 55																			.75	
Lincoln		11.50	.35	8.50	2.00		8.00												1.00	5.00
Marmon								27.20		2.75	9.75							2.50	2.00	3.80
Moon A		7.50	4.00	4.50	.50		2.00	7.00	.50									2.00	.40	2.25
Nash Adv.		2.75	7.50			2.75		11.25			22.75							2.50	.50	1.25
Oakland	4.50	4.00	.40	3.40	.90	2.50	2.25	4.25		1.75	2.50								.50	1.25
Oldsmobile		4.50				1.50		1.25	5.50	1.25	2.50							2.25	.75	.75
Overland 91-92	13.00	4.25				2.25		8.00			5.25							1.50	.75	
Packard 6		2.25	.75	6.15	1.50	3.00	3.00	21.00		1.95	8.25								1.20	.75
Packard 8		2.25	.75					22.50		3.60	9.00								1.50	.75
Paige 24-26		1.50	†3.50	4.25			.75	6.50	.50									1.50	.40	1.50
Peerless 8		14.00				4.00												3.00	.50	3.50
Pierce Arrow 80		13.00	12.00	12.00	1.00		4.00	14.50										2.50	1.00	.75
Pontiac																			.75	
*Reo		12.00				30.00		8.25			35.00							4.00	3.00	1.75
Rickenbacker 6	4.00	4.00	.75	5.25	1.50	9.75	4.00	15.00		7.00								2.00	.75	1.25
Star 4	2.00	.60	.50	4.40	.40	.40	.80	4.80	.40	1.25								1.20	.40	.50
Star 6	3.00	1.25	.50	5.30	.80	.40	1.20	7.90	.40	1.25								1.20	.40	.50
Stearns-Knight		13.00						28.00			12.75	16.50	4.50	22.75	6.50	4.00			1.00	
Studebaker Spe. Big 6	1.25	8.75			2.00	4.50	3.25	13.00	.50									2.75	.50	1.25
Studebaker Stand.	1.25	8.75	.50	7.50	2.00	4.50	3.25	12.50	.50									2.75	.50	1.25
Vette 60	7.00	4.00				2.75		4.00										1.50	.35	
Wills St. Claire 6								2.50											.75	
Willys Knight		9.00					4.00	22.00		1.50	3.00	12.00	15.00	3.00	18.00	5.00	3.75	1.50	.90	
	10-B	11-B	12-B	13-B	14-B	15-B	16-B	17-B	18-B	19-B	20-B	21-B	22-B	23-B	24-B	25-B	26-B	1-C	2-C	3-C

*Franklin and Reo prices include necessary material.

†Adjust idler spring.

Motor Age Flat Rate Manual

Cooling System and Fuel System Operations

- 4-C. Remove and replace and over-haul water pump.
- 5-C. Remove and replace radiator assembly.
- 6-C. Renew core, 5-C, incl.
- 7-C. Renew all water hose.
- 8-C. Renew lower radiator hose, only.
- 9-C. Renew cylinder top hose only.
- 10-C. Remove and replace thermostatic control.

Group D—Carburetor, inlet pipe, carburetor control, carburetor air heater, fuel tank, fuel pipe and fuel systems

- 1-D. Renew carburetor.
- 2-D. Remove, replace, clean and adjust carburetor.

- 3-D. Clean and adjust carburetor without removing.
- 4-D. Remove, replace and clean gasoline tank.
- 5-D. Clean tank and lines without removing.
- 6-D. Renew manifold gaskets.
- 7-D. Overhaul vacuum tank internals, 8-D, incl.
- 8-D. Remove, replace and clean vacuum tank.
- 9-D. Renew fuel line, tank to vacuum tank.
- 10-D. Renew tank fuel gage assembly.
- 11-D. Set carburetor fuel level, after 2-D.
- 12-D. Renew carburetor needle and seat after 2-D.
- 13-D. Remove and replace and clean air cleaner.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	4-C	5-C	6-C	7-C	8-C	9-C	10-C	1-D	2-D	3-D	4-D	5-D	6-D	7-D	8-D	9-D	10-D	11-D	12-D	13-D
Ajax		1.75		1.50				1.00	1.75		3.00	2.00		2.25	1.50					
Auburn 6-66		1.75		1.50				1.50	2.50		3.50	2.00		2.25	1.25					
Buick	5.25	1.25	2.00	1.80	.75	.60			3.75	.75	4.50	1.25		2.25	1.00	2.75	.75	.50	.85	1.50
Cadillac	6.75	4.50	4.90	2.50	.75	.60	2.00	4.25	1.75	1.00	5.75	2.00	.75			1.00	.40	1.30		
Case Y		2.75		1.50			2.00	1.25	2.50		3.50			2.25	1.50					
Chandler	5.60	2.40	3.20	1.60	.40	.40		1.60	4.00	.80	3.20	.80	3.20	3.20	1.60	2.40	.80			
Chevrolet	3.50	1.50	2.00	1.50	.50	.50		.75	1.50	.30	1.25	1.00	.50	1.65	1.85	.75		.75	.75	
Chrysler	3.40	1.85	3.75	1.25	.50	.50	1.80	1.25	1.50	.85	1.20	1.00	3.75	1.90	1.00	3.00		.75	1.00	1.50
Cleveland	3.20	1.60	2.40	1.60	.40	.40		1.20	5.00	2.00	2.00	.80	.80	2.00	1.20	1.00	.40	.60	1.00	
Davis 92	3.50	1.50	3.00	2.25		.75		1.50	3.00	.75	4.50	1.50	3.00	3.00	1.50	3.00	4.50	3.00	4.50	.75
Diana		2.50		1.50				1.00	1.75		4.00	2.75		2.25	1.50					1.50
Dodge Brothers	7.25	2.25	3.25	2.75	1.20	.75		.75	1.50	.75	1.90	1.50	.75	2.25	1.75	3.00	.75	.75	1.00	
Durant	3.00	2.00	2.80	.80	.40	.40		.75	2.00	.40	2.50	3.00	.75	.75	.50	1.60	.40		.25	
Elcar 6-67		1.75		1.50				1.50	2.50		3.00	2.00		2.25	1.25					
Essex 6		1.90	3.40	1.50	.80	.80		1.50	2.30	.80	3.00	1.50	1.50	2.30	1.20	3.00	.80	.40	.40	
Ford		1.30	6.00	1.25		.35		.75	1.00	.35	3.00	.40	1.00					.60	.50	
*Franklin 11		1.20	12.70					27.20	3.75	1.60	1.68	1.15	2.26	1.75	1.75	4.80	4.80	1.60		1.50
Gardner 6		1.50		1.50			1.80	1.50	2.50		4.50	2.00		2.25	1.50					
Hudson	5.40	1.90	3.40	1.50	.80	.80		1.50	2.30	.80	3.00	1.50	1.50	2.30	1.20	3.00	.80	.40	.40	
Hupmobile 4		1.25	1.50		.40	.40		1.50	2.00	1.25	1.25	.90	.75	2.00	1.25	3.00	.75	.60	1.25	
Hupmobile 6	1.25	1.50		1.50	.50	.50			1.75		2.25			1.75			.40			
Hupmobile 8	2.25	1.50		.75	.40	.40	.75		1.95	3.90	.75			1.75			.50			
Jewett (New Day)	12.00	1.50	1.90	2.25	1.50	.50		.75	1.50	.40	.50	1.25		2.25	2.00	.50	.75		.75	
Jordan 8	3.75	2.25	3.25	.75	.50	35.00	1.80	1.25	1.75	.50	3.00	1.00	3.50	2.25	.50	3.00	.50	1.00	1.75	1.50
Kissel 55		2.50		1.50			3.00	.75	1.50		4.00	2.00		2.25	1.75					1.50
Lincoln	7.50	4.50	7.00		2.75	1.50		3.00	4.00	1.00	3.50	1.50	2.00			4.75	.75	.50	1.50	
Marmon		1.75	36.60	4.40	1.85	1.60		38.50		1.10	4.30		1.80			8.15				
Moon A	6.00	1.50	3.75	3.00	1.50	.75		1.00	2.50	.50	3.25	1.50	2.00	2.00	1.20	2.50	.75	.50	1.25	
Nash Adv.	3.25	2.00	1.00	1.50	1.00	.75		1.50	2.50	1.00	4.50	1.75	1.50		1.50	1.50			1.25	
Oakland	2.00	1.25	1.50	1.50	.50	.75		1.00	1.50	.60	1.75	1.00	.75	.85	.75			.50	1.00	1.50
Oldsmobile	2.25	2.00	2.75		.50	.50		.50	1.20	.65	1.85	1.25		2.00	1.25	.75		.50		
Overland 91-92		1.50	3.00	1.80	1.20	.75		1.25	1.50	.65	3.00	1.00	1.50			1.20		.35	1.15	
Packard 6	8.25	2.75	3.00	1.50	.75	.75	1.80	5.25	3.00	2.25	8.25	4.25		4.50	3.00	3.00	8.25	3.00	3.00	
Packard 8	8.25	2.70	3.00	1.50	.75	.75	1.80		3.00	2.25	8.25	4.25		4.50	3.00	4.25	8.25	3.00	3.00	
Paige 24-26	13.50	1.50	1.90	1.90	1.25	.50		.75	1.50	.40	.50	1.25		2.25	2.00	.50	.75		.75	1.50
Peerless 8	5.25	1.50	2.50	3.00	1.25	.45		.75	1.50	.50	7.25	1.25		2.25	1.00	3.75	.50	.50	1.50	
Pierce Arrow 80	5.75	3.00	4.25	1.50	.75	.75	2.25													
Pontiac		1.75		1.25				.75	1.50		2.50			2.00	1.00					
*Reo	6.00	3.25	3.80	4.25		1.50		57.20	3.00	1.00		1.50	2.00	2.50	2.00	4.25		.50		
Rickenbacker 6	2.25	2.00	3.00	1.75	1.25	.50		2.00	2.30	.65	2.50	1.25		2.25	1.25	2.25	1.25	.40		1.25
Star 4	2.00	1.50	2.30	.80	.40	.40		.75	2.00	.40	2.00	2.50	.75	.75	.50	.40			.25	
Star 6	2.00	1.50	2.30	.80	.40	.40		.75	2.00	.40	2.00	2.50	.75	.75	.50	.40			.25	
Stearns-Knight		1.75	3.50					1.50	2.50		8.50						.75			
Studebaker Spe. Big 6	5.00	4.50	5.00	2.25	1.50	.75		1.75	2.00	1.25	3.25	1.50		2.25	1.50	2.50	.50	.50	2.00	1.50
Studebaker Stand.	6.75	4.50	5.00	2.25	1.50	.75		1.75	2.00	1.25	3.25	1.50		2.25	1.50	2.50	.50	.50		1.50
Vellie 60		1.25	2.00	1.00		.50		.75	2.00	.75	2.25	1.00		2.25	1.00	3.00	.75	.50	1.00	
Wills St. Claire 6		1.75	3.00			.50	1.80	1.50	2.25		7.00	2.25								
Willys Knight		1.50	2.25	1.50		.75	1.75	1.50	1.75	.90	3.00	1.25	1.50	3.60	3.00	2.25	1.25	.50	1.25	1.25

*Franklin and Reo prices include necessary materials.

Motor Age Flat Rate Manual

Exhaust System, Lubricating System, Ignition System

14-D. Remove carburetor dash control.
15-D. Replace carburetor dash control.

Group E—Exhaust manifold, exhaust pipe and muffler

1-E. Remove and replace exhaust manifold.
2-E. Remove and replace and clean muffler.
3-E. Remove and replace only muffler.

Group F—Oil pan, oil pump, oil pipes, strainers and gages

1-F. Remove and replace and clean oil pan.
2-F. Renew oil pressure gage.
3-F. Clean all engine oil lines.
4-F. Clean oil pump screen.
5-F. Remove oil pump.
6-F. Increase oil pressure (internal adjustment).

7-F. Increase oil pressure (external adjustment).

8-F. Remove, recondition and replace oil filter.

Group G—Spark plugs, cables, and switches, battery ignition and magneto

1-G. Clean and adjust interrupter points.
2-G. Clean and adjust spark plugs.
3-G. Retime ignition and synchronize.
4-G. 1-G, 2-G and 3-G combined.
5-G. Replace all high tension cables.

Group H—Generator, starting motor and battery

1-H. Adjust generator charging rate.
2-H. Renew all primary wiring.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	14-D	15-D	1-E	2-E	3-E	1-F	2-F	3-F	4-F	5-F	6-F	7-F	8-F	1-G	2-G	3-G	4-G	5-G	1-H	2-H
Ajax			2.75	2.00	1.50	1.75	.75		1.80	2.25	1.80			.50				.75	.50	
Auburn 6-66	.50	.50	4.75	2.25	1.50	2.00	1.75			2.75		.75		.75				3.00	.50	
Buick				3.50	1.50	1.80				.50			3.00	1.00	.75	.85	2.25	3.00	.75	
Cadillac			2.25	8.00	2.50	2.25			2.75			1.00	3.00	1.25	1.00	1.00	2.50	4.50	.75	
Case Y	.50	.50	3.00	3.50	2.00	2.00	.75					.25		.75				2.40	.50	
Chandler		.80	4.00		1.60	1.60	1.60	6.40	.80	2.40	4.80			1.60	1.20	1.60		2.00	.40	6.40
Chevrolet			.50	2.25	.75	2.25	.75	2.25		.50				1.50	.30	.65	1.00	1.00	.50	2.25
Chrysler			3.50	3.50	1.20	1.20				1.00		1.75	3.00	.75	1.20	.30	2.00	1.65	.40	
Cleveland		.80	1.60	1.00	1.00	1.00	.40	4.00	2.00	2.00		.40		.40	1.00	1.00	2.40	.40	.40	
Davis 92	.75	.75	3.00	3.00	2.25	1.50	.75	3.00	1.50	3.00	3.75			.75	.75	.75	2.25	3.00	.75	6.00
Diana			3.75	2.25	1.50	2.25	.75			1.50		.50	3.00	.75					.50	
Dodge Brothers			1.50	3.90	1.90	4.50	.75	2.25		6.00				.75	.50	.75	1.50	1.75	.75	
Durant			.60			1.50	.60			.40				.60	.30	.60	1.50	1.80	.50	
Elcar 6-67				3.00	1.75	2.00	1.75					.75	3.00	.75				2.50	.50	
Essex 6	.40	.40	2.30	3.40	1.90	1.50	.80	1.20	.40	1.50			.80	.40	.80	.40	1.50	.40	.80	6.00
Ford	.25	.25	1.50	2.25	1.00	.75								.35	.35	1.25	.40	.40	.30	
*Franklin 11	.60	.60	2.07	2.43	1.15	9.45			9.45	4.40	5.54			1.65	1.65	1.65	6.90	1.80		
Gardner 6	.50	.50	4.50	2.25	1.50	2.00	.75			2.75		.75		.75					.50	
Hudson	.40	.40	2.30	3.40	1.90	1.50	.80	1.20	.40	1.50		.80	.80	.40	.80	.40	1.50	.40	.80	6.00
Hupmobile 4				3.50	1.25	1.75	.75	1.50		1.50		.50		1.25	.75	1.25	2.00	1.50	.50	
Hupmobile 6					1.50	1.00	.50					.75		.75	.50			1.00	.50	
Hupmobile 8					1.20	2.50	.40					.75		1.20		.40		.40	.40	
Jewett (New Day)	.75	.75	2.00	2.75	1.25	1.75	.75	3.00		1.50		.75		.75	.75			1.25	.75	
Jordan 8					2.00	2.00				1.75		.70		1.00	1.00	1.00	2.50	1.35	.75	10.50
Kissel 55	.50	.50	1.80	2.50	1.50	2.25	.75					.50	3.00	.85				3.00	.50	
Lincoln			2.00	5.00	2.50	2.50	.75	8.00				.50		1.25	1.25	2.00	4.00	2.50	1.50	
Marmon	.50	.50	3.50			2.95	3.50		1.15			.50	3.00	1.15	\$2.00			\$7.30	1.10	
Moon A			3.25	2.00	1.50	2.00	.75			2.75	.75			.75	.80	.75	2.00	2.50	.75	
Nash Adv.			1.00	3.75	2.25	3.00	.75	4.50		7.75			3.00	1.00	.75	.75	1.50	1.50	.50	
Oakland			2.00	2.25	.75	1.25	.50	2.25		1.80		.35	3.00	.50	.80	.50	1.25	.75	.50	
Oldsmobile			4.50	2.75	1.00	1.50	.50			2.25				.75	.75	1.50	1.25	1.50	.50	
Overland 91-92			1.50	3.00	1.50	2.25		4.50						.50	.50	.50	1.15	1.50	.65	
Packard 6			3.60	1.50	6.00	3.00	.75	6.15		4.50		1.50	3.00	1.20	1.20	2.25		3.00	1.50	
Packard 8			3.90	7.50	6.00	4.25	.75	6.15		5.25		1.50	3.00	1.20	1.35	2.25		4.25	1.50	
Paige 24-26	.75	.75	2.00	3.75	1.50	1.75	.75	3.00		1.25		.75		.75	.75			1.25	.75	
Peerless 8				2.50	1.25	3.50	.75	4.75		1.50		.50	3.00	1.00	1.00	.75	2.00	4.00	.50	
Pierce Arrow 80			3.75	6.75	4.50	3.50	.75	5.00		5.75		1.25		1.50	1.00	1.00	2.00	3.00	1.00	
Pontiac			2.00	2.25	1.00	1.25	.75			1.50		.25		.65				.75	.50	
*Reo	.50	.50	4.25	3.25	1.50	3.00	.50			2.00		.75		2.00	1.20	2.00	3.75	2.00		
Rickenbacker 6			3.00	4.00	1.50	1.50	1.20	4.50		3.50			3.00	1.00		2.00		3.00	.45	
Star 4			.60	2.00	1.50	1.50	.60			.40	3.00			.60	.30	.60	1.50	1.80	.50	
Star 6			.60	2.00	1.50	1.50	.60			.40	.50			.60	.40	.80	1.80	1.80	.50	
Stearns-Knight			3.25	4.50	2.00	4.50	.75					.75		1.00	1.25			3.00	.50	
Studebaker Sp. & Big 6				4.00	2.25	3.75	.75			3.00			3.00	1.00	.80	1.25	2.00	1.50	.50	
Studebaker Stand.				4.00	2.25	3.75	.75			4.50			3.00	1.00	.80	1.25	2.00	1.50	.50	
Vellie 60			2.00	3.00	1.50	1.00	.75	3.75						.50	.75	.75	2.00	2.50	.50	3.00
Willis St. Claire	.50	.50	1.25	3.00	1.50	1.50	.75			1.25		.50		1.00				2.50	.75	
Willis Knight			3.50	5.00	3.00	4.50	.75	6.00		4.50			3.00	.50	.75	1.25	1.90	2.50	.40	

*Franklin and Reo prices include necessary materials.
†Includes plug points.

‡Price for double ignition.
§Price for single ignition.

Motor Age Flat Rate Manual

Starting, Lighting and Miscellaneous Electrical Operations

- 3-H. Renew generator brushes.
- 4-H. Renew starting motor brushes.
- 5-H. Renew motor generator brushes.
- 6-H. Remove and replace generator.
- 7-H. Remove and replace starter.
- 8-H. Remove and replace motor generator.
- 9-H. Remove and replace starter switch assembly.
- 10-H. Tighten battery connections, all.
- 11-H. Remove and replace ignition and light switch.
- 12-H. Focus headlamps.
- 13-H. Renew one headlamp lens.

Group I—Lamps and wiring, switches and instruments, horn

- 1-I. Replace ammeter.
- 2-I. Oil and tune horn.
- 3-I. Focus lamps and aim lamps.

Group J—General—clutching parts—releasing parts

- 1-J. Adjust clutch pedal.
- 2-J. Remove and replace clutch assembly.
- 3-J. Renew discs.
- 4-J. Renew discs after 2-J.
- 5-J. Reline discs after 2-J.
- 6-J. Wash out and adjust clutch.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	3-H	4-H	5-H	6-H	7-H	8-H	9-H	10-H	11-H	12-H	13-H	1-I	2-I	3-I	1-J	2-J	3-J	4-J	5-J	6-J
Ajax				1.50	1.50		1.00			1.00	.50		.50	1.00	.30	6.00				
Auburn 6-66				1.50	1.50		1.00		1.00	1.50	.50	.75	.25	1.50	.50	7.25				
Buick				1.50	1.50		.75	.25	1.35	.75	.40	.75			.50	7.00	8.50	3.00	5.00	1.00
Cadillac	2.30			3.50	1.50		.75	.75	1.50	1.00	.75	.75	.50	.75	.75	9.25	14.00		4.80	2.00
Case Y				1.50	1.50		1.00		1.00	1.40	.75	1.50	.75	1.40	.50	8.75				
Chandler	3.20	3.20		3.20	1.60		1.60	.40	1.60	1.60	1.60	.80	.80	1.60	1.60	11.20			11.20	1.60
Chevrolet	2.25	1.80		1.50	1.00		1.25		.75	.50	.35	.50	.50	.50		5.25				.75
Chrysler	2.50	1.50		1.00	.40		1.20	.50	1.20	.40	.40	.75	.75		1.00	5.50		2.50		2.00
Cleveland	2.40	1.60		1.60	.80		.60	.40	1.20	.60	.40	1.00	.40	1.00	.80	7.20	7.20	.80	.80	1.00
Davis 92	4.50	4.50		2.25	1.50		.75	.75	3.00	1.50	.75	1.50	1.50	1.50	.75	9.00	9.00		9.00	1.50
Diana				1.50	1.50		1.00			.75	.50	.75	.75	.75	.75	8.25				
Dodge Brothers			3.00			3.00	3.00	.75	1.25	.60	1.20		.50	.60	1.25	9.25	11.00	1.50		2.25
Durant	2.25	2.00		3.00	.75		.50	.75	1.50	.50	.20	.50	.30	.50	.75	3.00			1.20	
Elcar 6-67				1.50	1.50		1.00		1.00	1.50	.75	.90	.75	1.50	.50	8.00				
Essex 6				1.50	1.50		1.50	.80	1.50	.80	.80	.80	.80	.80	.40	6.00	9.00	3.00		1.50
Ford				1.00			1.00	.25	.75	.50	.50	.50	.50	.50	.50					
*Franklin 11	4.33	3.70		1.45	1.25			1.80	1.55	.75	4.33			.75	1.65	6.45	16.95	10.50	3.60	1.65
Gardner 6				1.50	1.50		1.00		1.00	.75	.50	.75	.75	.75	.75	6.75				
Hudson				1.50	1.50		1.50	.80	1.50	.80	.80	.80	.80	.80	.40	6.00	9.00	3.00		1.50
Hupmobile 4	2.50			1.20	.75		1.25	.40	1.25	.50	.50	.75	.50	.50	.50	4.75	6.75	2.00		1.75
Hupmobile 6				1.25	.75		.75		1.25	.75	.50	.50	.50	.75						
Hupmobile 8				1.95	.75		.75	.40	1.20		.40	.75	.40	.75	.40	5.70				
Jewett (New Day)	3.75	3.75		.75	1.25		.75	.50	1.25	.50	.50	.75	.50	1.25	.50	4.00	3.75	1.25	.75	
Jordan 8	2.50	2.50		1.25	.75		.75	.50	2.00	.75	.75	1.00	.75		.50	8.75	8.75			2.25
	3-H	4-H	5-H	6-H	7-H	8-H	9-H	10-H	11-H	12-H	13-H	1-I	2-I	3-I	1-J	2-J	3-J	4-J	5-J	6-J
Kissel 55				1.50	1.50		1.00		1.00	1.00	.50	.90	.75	1.00	.50	8.00				
Lincoln				5.00				.50	2.75			2.25	.75	.75						
Marmon	4.95	4.05		1.50	1.00				3.00		3.55	2.70	.70		.50	3.10			12.95	
Moon A	3.75	3.75		.75	1.25		.80	.25	1.50	.50	.50		.65		.75	7.00	7.00	.50		.75
Nash Adv.	2.50	2.50		.75	.75		1.00	.35	1.50	.50	.50	1.75	.50	.50	.75	5.75	6.25	.75		1.35
Oakland					.50		1.00	.30	.75	.50	.35	.50	.50	.50	.75	3.75	5.00	1.25		1.50
Oldsmobile				1.50	.75		.75	.50	1.50	.50	.50		.50	.50	.50	6.75	7.50		1.50	6.75
Overland 91-92				1.50	2.25		1.50	.30	.75	.75	.75	.75	.75	.75	.75	6.00	6.75	1.00		1.50
Packard 6				1.80	1.20		3.00	1.20	3.75	1.50		.75	1.50	1.50	.75		13.50	3.00		
Packard 8				1.80	1.20		3.00	1.20	3.75	1.50		.75	1.80	1.50			13.50	3.00		
Paige 24-26	3.75	3.75		.75	1.25		.75	.50	1.25	.50	.50	.75	.50	1.25	.50	4.00	3.75	1.25	.75	
Peerless 8	4.00	3.50		2.50	2.75		1.50		1.50	.50	.75	1.50	1.00	.50	.75	8.25	9.50	1.25		1.50
Pierce Arrow 80				2.25	1.50		.75		.75			.75	.75							
Pontiac				1.75	1.50		.75		1.90	1.00	.50	.50	.75	1.00						
*Reo							1.00	1.50		.75	.40		.75	.75	1.00	5.25	21.50	16.00		1.50
Rickenbacker 6				3.00			.40	.75	1.50	.85	.65	.85	.75	.85	.75	6.75	8.00	1.25		1.50
Star 4	2.25	2.00		3.00	.75		.50	.75	1.50	.50	.20	.50	.30	.50	.75	3.00			1.20	
Star 6	2.25	2.00		3.00	.75		.50	.75	1.50	.50	.20	.50	.30	.50	.75	3.00			1.20	
Stearns-Knight				2.00			2.00		1.25			1.25	.85							
Studebaker Spe. Big 6	3.00	3.00		1.50	2.25		1.00		1.00	1.25	.75	1.25	.75	1.25	1.00	6.00	7.50	1.60		1.50
Studebaker Stand.	3.00	3.00		1.50	2.25		1.00		1.00	1.25	.75	1.25	.75	1.25	1.00	6.00	7.50	1.60		1.50
Velie 60							1.25	.25	1.50	.50	.75	.50	.50	1.00	.25	3.50	6.50	2.75		1.50
Wills St. Claire 6				1.00	1.00			1.00				.75			1.00		13.50			
Willys Knight				1.00	1.50		1.00	.75	1.75	1.25	.65	1.75	1.70	1.25	.75	7.50	9.00	2.00		1.50

*Franklin and Reo prices include necessary materials.

Motor Age Flat Rate Manual

Clutch and Transmission Operations

- 7-J. Renew release bearing.
- 8-J. Renew release after 2-J.
- 9-J. Renew clutch gear assembly.
- 10-J. Remove and replace and recondition clutch.
- 11-J. Recondition clutch and transmission after 2-J.
- 12-J. Renew one clutch spring.
- 13-J. Renew shifter release yoke.
- 14-J. Reline Ford bands, starter, open.
- 15-J. Reline bands, starter, closed.
- 16-J. Reline bands, no starter.
- 17-J. Treat slipping clutch.
- 18-J. Reline cone clutch, 2-J, incl.

Group K—Shifting mechanism, control, propeller shaft

- 1-K. Renew cover gasket.
- 2-K. Remove and replace, dismantle and reassemble.
- 3-K. Renew case.
- 4-K. Renew speedometer driving gear.
- 5-K. Renew main shaft.
- 6-K. Renew sliding 2nd gear.
- 7-K. Recondition all but case.
- 8-K. Remove and replace only transmission.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	7-J	8-J	9-J	10-J	11-J	12-J	13-J	14-J	15-J	16-J	17-J	18-J	1-K	2-K	3-K	4-K	5-K	6-K	7-K	8-K
Ajax													1.00							4.50
Auburn 6-66				8.75									.75							8.00
Buick	6.75	.75	7.75	11.50	11.50						1.50		.50	7.25	12.00	6.50	7.75	7.75	11.00	6.50
Cadillac	10.50	1.00		13.75	12.50		11.00						.75		17.75	2.75			14.75	9.50
Case Y													1.00							8.75
Chandler	12.00		12.00	12.80		12.80	4.00				1.10			12.80	12.80	4.80	5.60	5.60	12.80	7.20
Chevrolet	1.00	.25	6.00	7.50	4.25		.80				.75	6.75	.50	4.50	6.25		5.75	5.75	6.25	3.50
Chrysler		1.50	7.50	8.50	7.00	6.00	.75							7.00	9.25	2.75	5.75	5.75	9.00	5.75
Cleveland	7.20	.80		8.00	2.00	6.40	4.80						.80	8.80	8.80	6.40	3.60	8.00	8.80	2.80
Davis 92	9.00	9.00		9.00	15.00	9.00	3.00				1.50		1.50	15.00	15.00	3.00	6.00	6.00	15.00	3.00
Diana				13.50									1.25							8.00
Dodge Brothers	10.50	1.25	7.50	12.00	5.00	10.50	4.50				2.25	12.00	2.50	11.00	13.50		9.00	7.50	14.75	9.00
Durant	1.00			4.20	1.20								.75	6.00	6.00	.60	6.00	6.00	7.20	2.00
Elcar 6-67				9.00									.75							8.00
Essex 6	6.00	.80		9.00	3.00						1.50		1.50	10.50	10.50		4.50	4.50	10.50	6.30
Ford	9.00	.85		20.00	6.00	8.50	8.50	3.75	4.85	3.25			.50	17.50			22.50		22.00	8.00
*Franklin 11	12.35	5.25	23.15	7.10	8.74	7.95							2.25	14.56	64.86	12.16	19.51	19.46		6.47
Gardner 6				8.75									1.00							7.50
Hudson	6.00	.80		9.00	3.00						1.50		1.50	10.50	10.50		4.50	4.50	10.50	6.00
Hupmobile 4	7.75		6.25	7.75	7.50						1.50		1.25	7.75	8.50	2.50	5.75	5.75	8.50	4.75
Hupmobile 6	2.75			4.50																2.50
Hupmobile 8	3.45			7.20													3.00			2.50
Jewett (New Day)	4.00	.75					1.50						.75	3.75	5.00		3.50	3.50	5.00	2.75
Jordan 8	9.00	1.50	9.50	13.75	10.00	8.50	1.00						1.25		10.50	2.75	6.25	6.25	16.00	8.00
	7-J	8-J	9-J	10-J	11-J	12-J	13-J	14-J	15-J	16-J	17-J	18-J	1-K	2-K	3-K	4-K	5-K	6-K	7-K	8-K
Kissel 55				13.50									.85							8.00
Lincoln	12.00										2.00			18.00				12.00		
Marmon														11.70	57.40					
Moon A	7.00	.75	5.50	8.50	6.50	6.00	4.50						1.20	6.00	7.20		4.00	4.00	7.50	4.50
Nash Adv.	7.25	1.50		11.25	5.75	8.00	7.50				1.25		1.75	12.50	12.50	9.25	9.25	12.50	12.50	15.25
Oakland	5.25	1.00		4.00	3.75		3.00				1.25	4.00	.70	5.25	7.00		2.00	2.00	7.00	3.75
Oldsmobile				4.50	6.75	6.75	4.50						1.50	10.50	11.25	5.75	6.00	7.50		5.75
Overland 91-92	6.75	.50	8.50	7.50	6.00	6.00					1.00		.75	8.00	9.00	4.50	6.00	6.75	9.00	6.00
Packard 6	11.25			10.50									1.50	13.50	21.00	2.25	6.00	6.00	13.50	
Packard 8	11.25			10.50									1.50	13.50	21.00	2.25	6.00	6.00	13.50	
Palge 24-26	3.75	.75											.75	3.75	5.00		3.50	3.50	5.00	2.75
Peerless 8	9.75		10.25	10.75	11.75	8.00							1.00	10.75	18.00				16.75	8.50
Pierce Arrow 80																				
Pontiac																				
*Reo	12.00		16.50								2.00		1.50	11.50	38.50		20.00	28.00	95.00	6.00
Rickenbacker 6	6.00		9.75	7.50	5.00						1.50		1.25	8.75	9.75				9.75	6.75
Star 4	1.00			4.20	1.20								.60	6.00	6.00	.60	6.00	6.00	7.20	2.00
Star 6	1.00			4.20	1.20								.75	6.00	6.00	.60	6.00	6.00	7.20	2.00
Stearns-Knight													1.75							8.50
Studebaker Spe. Big 6	6.00	.75	7.50	9.00	11.00	7.50	3.00				2.25	9.00		9.00	14.00		7.50	7.50	14.00	4.50
Studebaker Stand.	6.00	.75	7.50	9.00	11.00	7.50	3.00				2.25	9.00		9.00	14.00		7.50	7.50	14.00	4.50
Vellie 60	4.00	1.00	6.00	8.00	7.00		5.50				1.00		1.00	6.00	6.75		7.00	7.00	8.00	4.50
Wills Ste. Claire 6													1.50							13.50
Willys Knight	9.00	1.00	7.50	12.00	9.00	9.00	.75				1.50		.75	14.25	12.00		3.75	8.00	12.00	

*Franklin and Reo prices include necessary materials.

Motor Age Flat Rate Manual

Rear Axle and Braking System Operations

9-K. Renew one shifter fork.
10-K. Recondition all but case, after 8-K.

11-K. Remove main shaft end play.

Group L—Housing, torque arm or radius rod, drive pinion, differential and axle shaft

1-L. Remove and replace only axle assembly.

2-L. Remove and replace, dismantle, reassemble and reinstall rear axle.

3-L. Overhaul axle assembly, except brakes. 1-L incl.

4-L. Remove and replace differential carrier assembly.

5-L. Renew ring gear and pinion, 6-L incl.

6-L. Adjust ring gear and pinion mesh.

7-L. Renew ring gear and pinion after 4-L.

8-L. Renew pinion shaft bearings.

9-L. Remove and replace torque arm assembly.

10-L. Renew torque arm rear, pin and bushings after 9-L.

11-L. Remove and replace torque tube.

12-L. Renew axle outer bearings after 4-O, one side.

13-L. Remove and replace differential cover, wash and inspect gears.

14-L. Renew one axle shaft.

Group M—Outer brake—inner brake—pedal brake control, and hand brake control

1-M. Reline and adjust front and rear service brakes.

2-M. Reline and adjust outer rear brakes only.

3-M. Reline and adjust inner rear brakes only.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	9-K	10-K	11-K	1-L	2-L	3-L	4-L	5-L	6-L	7-L	8-L	9-L	10-L	11-L	12-L	13-L	14-L	1-M	2-M	3-M
Ajax				4.50					2.25							1.50	2.25			
Auburn 6-66				5.00					3.50							1.25	3.00			
Buick	5.00	6.25	1.25	3.00		18.75	11.50	15.00	1.50		15.25					1.50		10.00	6.25	6.00
Cadillac		5.50		10.25		38.00		21.50	5.00						.75	2.25	4.00	17.00	10.75	9.60
Case Y				7.50					3.50			3.75	2.50			1.50	3.15			
Chandler	2.40	12.80		9.60	24.00	19.20	8.00	12.80	5.60			3.20	4.00	3.20	3.20	5.60	2.40	14.40	8.00	
Chevrolet	1.20	3.00		3.25	4.75	6.75	6.75	6.75	6.00	1.25				2.75			6.00		4.75	4.75
Chrysler	2.25	3.75		3.75		12.00	6.00	9.00	5.25	4.50	6.00				1.50	2.00	2.75	9.50	7.50	
Cleveland	2.00	6.80	1.60	5.00	16.80	12.80	5.60	10.40	2.00	6.40					1.60	1.00	1.60	11.60	5.80	
Davis 92	3.00	15.00	3.00	4.50	27.00	18.00	6.00	14.00	4.50	9.00	10.50				4.50	3.00	3.00	13.50	7.50	9.00
Diana				6.75					3.50							1.00	3.50			
Dodge Brothers	4.50	4.50		4.75	12.00	16.50		7.75	3.75	5.25	6.75			12.00	2.25	1.90	1.90		7.50	6.00
Durant	1.20	4.00		2.00	10.50	11.50	3.00	6.00	2.50	2.00	2.50			1.50	1.60		1.60		5.00	5.00
Elcar 6-67				5.50					5.75							1.25	2.00			
Essex 6	1.50	4.50	8.30			12.80	3.80	9.00	3.00		5.30				1.50	1.90	1.50		6.00	7.50
Ford		3.50		2.75		8.25		7.50			5.75			4.50	1.50		5.75			1.75
*Franklin 11			8.26	5.80	27.00	27.00	13.50	56.75		45.90	27.60				8.70	2.00	14.55		10.10	
Gardner 6				5.50					3.50							1.00	3.50			
Hudson	1.50	4.50	9.00			12.80	3.80	9.00	3.00		7.50				1.50	1.90	1.50		6.00	7.50
Hupmobile 4	1.50	3.75		3.75	14.50	18.75		12.75	2.00	4.50	3.50				.85	2.00	9.00		4.50	4.50
Hupmobile 6				4.50				5.25	2.00								1.75			
Hupmobile 8				3.50				5.70	2.25								2.25			
Jewett (New Day)	2.00			5.50	13.50	9.00	4.00	5.75	4.50	1.25					1.75	1.25	2.00	†6.75	3.50	
Jordan 8		4.75		8.50	17.00	21.00	6.75	14.25		5.50	7.50				1.50	1.00	3.75	11.50	6.75	8.75
Kissel 55				8.25											1.50	1.00				
Lincoln							15.00		6.00					9.00		2.75			10.50	
†Marmon				4.20	31.75			81.75				4.05			14.10		16.10	24.60	13.55	13.00
Moon A	2.00	2.75	3.75	8.00	16.50	20.00	7.00	14.00	3.50	5.25	7.50				1.50	1.00	3.00	12.00	7.00	9.00
Nash Adv.	6.25	7.50	3.25	6.25	9.25	15.50	3.25	6.75	2.50	4.75	7.00				1.25	1.50	2.75	11.25	8.75	
Oakland	1.50	3.25	3.00	3.25		9.50	2.75	6.00	1.50	2.00	2.75			4.00	.75	1.65	5.25	10.00	5.50	5.50
Oldsmobile				6.00	7.50	16.00	6.00	8.25	1.25	2.25	6.75				1.25		1.50		4.75	
Overland 91-92	3.00	3.00	6.00	3.00		9.25		8.25	6.00	2.00	7.50			4.50	.45	.75	3.00		6.00	6.75
Packard 6							16.50	18.75	6.00	3.75		3.75	1.50		3.00		3.00	19.50	10.50	12.00
Packard 8							16.50	18.75	6.00	3.75		3.75	1.50		3.00		3.00	19.50	10.50	12.00
Paige 24-26	2.00			5.50	13.50	9.00	4.00	5.75	4.50	1.25					1.75	1.25	2.00	†6.75	3.50	3.75
Peerless 8	2.50	9.25	1.00				6.25	10.00	2.50	5.00	3.25	2.25	2.40		1.35	2.25	2.75		6.50	6.50
Pierce Arrow 80							14.25	18.75	1.25	3.75		3.75					3.00	18.75	11.00	12.00
Pontiac				4.00					1.50								4.50			
*Reo		.90	3.25				6.50	40.00	3.50		52.50	2.25			9.25	2.50	15.25		16.00	14.50
Rickenbacker 6	2.00	3.00	3.50	5.00		11.25		9.00	4.50	3.50	6.00				3.00	2.25	2.50	10.50		5.50
Star 4	1.20	4.00		2.00		8.25	3.00	6.00	2.50	2.00	2.50			1.50	1.60		1.60		4.00	4.00
Star 6	1.20	4.00		2.00		8.25	3.00	6.00	2.50	2.00	2.50			1.50	1.60		1.60		4.00	4.00
Stearns-Knight				9.50			8.00	4.50				4.00	2.00			1.75	3.00		8.50	
Studebaker Spec. Big 6	3.00	9.00				22.00	10.50	15.00	12.00	3.50	7.50				.75	1.25	2.25	18.00	6.00	6.00
Studebaker Stand.	3.00	9.00				22.00	10.50	15.00	12.00	3.50	7.50				.75	1.25	2.25		6.00	6.00
Vellie 60	1.50	4.00	2.00	5.50		15.00	3.75	8.00	2.00	4.25	6.00				1.25	1.00	2.00		9.00	6.00
Wills St. Claire 6				6.00			8.50		3.50							.75	.75	3.50		
Willys Knight	2.25	4.50		3.00		12.75	6.50	9.00	6.00	2.00	7.50				.75	1.25	2.75		6.00	6.75

*Franklin and Reo prices include necessary materials.
†Includes bleeding system and adjusting.

†Marmon 14-L—Does not include removal of housing.

Motor Age Flat Rate Manual

Brake, Front Axle and Steering System Operations

- | | |
|---|--|
| 4-M. Reline inner shoe, shoe removed. | 14-M. Renew rear wheel brake drum. |
| 5-M. Reline outer band, band removed. | 15-M. Same as 14-M, wheel off. |
| 6-M. Reline and adjust transmission brake, remove and replace, included. | 16-M. Renew front brake drum. |
| 7-M. Adjust service brakes. | 17-M. Renew as in 16-M, wheel off. |
| 8-M. Adjust emergency brakes. | 18-M. Renew brake rod or cable. |
| 9-M. Adjust transmission brake. | 19-M. Free up all rear brake operating shafts or renew. |
| 10-M. Adjust all wheel brakes. | |
| 11-M. Reline and adjust two wheel brakes, all. | Group N—Axle center, steering knuckles steering rods and steering gear |
| 12-M. Reline and adjust four wheel brakes, all. | 1-N. Remove and replace axle center only. |
| 13-M. Drain system refill new fluid, bleed lines and adjust hydraulic brakes. | 2-N. Same as 1-N, four wheel brakes. |
| | 3-N. Straighten axle after 1-N. |
| | 4-N. Remove and replace knuckle assemblies. |

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	4-M	5-M	6-M	7-M	8-M	9-M	10-M	11-M	12-M	13-M	14-M	15-M	16-M	17-M	18-M	19-M	1-N	2-N	3-N	4-N
Ajax				2.25		1.00	2.25								.75	3.75		6.50		3.75
Auburn 6-66				4.25											1.25	5.50		6.00		5.00
Buick	1.00	1.00		3.50	2.00		5.75	10.40	14.25		3.00	1.25	3.00	1.25	1.00	6.25	7.00	8.50	3.60	5.00
Cadillac	1.25	1.25		4.00	3.00		7.25	17.25			4.25	2.20			1.50	12.00	7.00	7.00	6.00	14.60
Case V				1.50											1.25	3.50	9.50			3.00
Chandler			4.00	1.60		.80	3.20	8.00	14.40		4.80		4.80		.80	2.00	9.60	11.20	10.40	6.40
Chevrolet	.75	.75		.75	.75		2.00	5.00			1.25	.75			1.20		1.50		2.50	2.50
Chrysler		1.20	4.50		.75	.75			10.50	3.00	3.00	2.25	3.50	2.25			6.00	6.00		5.75
Cleveland		1.60	3.00	1.00	1.00	1.00	3.00	5.80	11.60		2.00	.80	1.60	.80	.80	3.20	6.40	8.00	1.60	4.80
Davis 92		.75	4.50	1.50	1.50	.75	3.00	7.50	13.50	4.50	3.00		1.50		1.50	4.50	4.50	6.00	9.00	6.00
Diana				2.00		.75									1.25			9.00		7.50
Dodge Brothers	1.50	1.50		1.75	2.00		3.75	14.25			3.40	2.25			.75	6.25	5.25		3.50	4.00
Durant				1.00	1.00		2.00	5.00			1.50	.75				1.75	3.00		2.50	3.00
Elcar 6-67				1.50	.75		1.50								1.25		5.00			1.75
Essex 6	1.20		1.20	2.70		3.80	10.50				3.00	1.50			1.20	5.30	6.40			2.30
Ford					.75	.50					1.25	.50			.70				1.50	1.50
*Franklin 11		3.25	5.30	.60	1.00	.60	1.00	15.40			4.55	2.30			2.60		47.74			4.56
Gardner 6				4.40		.75									1.25	6.50		6.00		5.00
Hudson	1.20	1.20		1.20	2.70		3.80	10.50			3.00	1.50			1.20	5.30	6.40			2.30
Hupmobile 4	.75	.75		1.25	1.50		3.25	11.50			3.25	2.00			1.50	5.75	3.50		4.25	3.50
Hupmobile 6		.50					2.25												4.75	2.50
Hupmobile 8			1.60			.75	3.00			3.00			3.40					10.65		
Jewett (New Day)	1.50	.75		1.50	.75		1.50		6.75	3.75	2.25	1.25			1.25		5.00	5.75		1.75
Jordan 8		1.20	3.50	2.00	.75	.75	2.50	11.50	11.50	3.50	2.75	1.00	3.00	1.50			9.00	9.00	4.50	7.50
	4-M	5-M	6-M	7-M	8-M	9-M	10-M	11-M	12-M	13-M	14-M	15-M	16-M	17-M	18-M	19-M	1-N	2-N	3-N	4-N
Kissel 55				2.00	.75	.75	2.50										9.25			8.00
Lincoln				1.50	2.50		4.50	17.50			4.25	2.25				9.00	9.00			6.00
Marmon	3.40	4.15		1.60	1.60		3.20	21.25	32.30		10.20	8.55	10.70	9.10	2.40		3.25	4.25		4.70
Moon A		1.00		1.50			2.50	9.50	11.50	3.50	2.50	1.00	2.50	1.00		5.75	6.00	Time		7.50
Nash Adv.	1.25	1.25	2.75	2.75	1.25	1.25		11.00	15.00		2.50	1.25	2.50	1.25	.75		7.50	10.00	6.00	4.50
Oakland	.70	.65	1.50	2.25	1.50	.50	2.25	9.00	12.00		1.50	.90	.90	.65	.65	4.50	3.00	4.50	2.50	1.50
Oldsmobile		2.00		.75		.50		6.00			3.00	1.50	3.00		1.75	4.00	5.75			2.25
Overland 91-92	.75	.65		.75	1.40		2.25	6.00			4.50	2.90			.75	4.50	6.00		2.25	2.25
Packard 6	1.05	.90		3.00	1.50		4.50	19.50	24.00		2.25	.75	2.25	.75	1.50	7.50	10.50	12.00	6.00	9.00
Packard 8	1.05	.90		3.00	1.50		4.50		24.00		2.25	.75	2.25	.75	1.50	10.50	10.50	12.00	6.00	9.00
Paige 24-26	1.50	.75		1.50	3.00		1.50		6.75	3.75	2.25	1.25			1.25	3.00	5.00	5.75		1.75
Peerless 8	1.00	1.00		1.50	2.50		2.25	13.00			2.50	1.50	2.25	1.50	1.00	4.75	5.50	7.00	5.00	5.25
Pierce Arrow 80	1.00	1.00		3.00	3.00		5.75		15.00							12.00	8.75	5.00		8.75
Pontiac				1.00	2.25										1.00	2.25	6.00			3.00
*Reo				2.00	2.75		7.00	27.25			25.00				3.25	14.00	5.75		4.00	4.75
Rickenbacker 6	.50		3.50	2.00	.65	.65	2.25	6.00	19.00		3.25	1.75	3.00	2.25	.75	6.00	8.25	8.25	6.00	
Star 4				.75	.75		1.50	4.00			1.50	.75				1.75	3.00		2.50	3.00
Star 6				.75	.75		1.50	4.00			1.50	.75				1.75	3.00		2.50	3.00
Stearns-Knight				1.50											1.50	4.50	6.50			
Studebaker Sp. & Big	1.00	1.00		1.50	3.00		3.75	9.00			4.50	3.00	4.25	3.25	1.00	9.00	7.50	8.50	4.50	6.00
Studebaker Stand	1.00	1.00		1.50	3.00		3.75	9.00			4.50	3.00	4.25	3.25	1.00	9.00	7.50	8.50	4.50	6.00
Vellie 60	.75	.75		1.25	1.50		3.20	12.00			3.00	1.75			1.25	.75	6.00	8.00		3.00
Wills St. Claire 6					.50					3.50						9.00			6.00	
Willis Knight	.75	.75		1.50	1.00		3.25	7.50			4.50	3.00			1.25	7.00	5.00		3.00	4.50
	4-M	5-M	6-M	7-M	8-M	9-M	10-M	11-M	12-M	13-M	14-M	15-M	16-M	17-M	18-M	19-M	1-N	2-N	3-N	4-N

*Franklin and Reo prices include necessary materials.
†Four wheel brakes.

Motor Age Flat Rate Manual

Steering System Operations

- | | |
|---|--|
| 5-N. Renew all knuckle and axle bushings after 4-N. | 14-N. Free up and grease steering system. |
| 6-N. Same as 4-N on four wheel brakes. | 15-N. Tighten all steering connections. |
| 7-N. Rebrush one knuckle and arm after 4-N. | 16-N. Overhaul steering gear, lower portion. |
| 8-N. Remove and replace knuckles, bolts frozen. | 17-N. Renew half nuts. |
| 9-N. Remove and replace and straighten tie rod. | 18-N. Renew nuts after 25-N. |
| 10-N. Renew one knuckle assembly. | 19-N. Renew steering arm drag link ball. |
| 11-N. Renew hub or drum after 12-N. | 20-N. Remove and replace hand wheel. |
| 12-N. Remove and replace only front wheel. | 21-N. Remove and replace and overhaul drag link. |
| 13-N. Adjust gear at housing only. | 22-N. Renew worm and wheel. |
| | 23-N. Remove and replace pitman ball arm. |
| | 24-N. Renew post jacket tube bushing. |

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	5-N	6-N	7-N	8-N	9-N	10-N	11-N	12-N	13-N	14-N	15-N	16-N	17-N	18-N	19-N	20-N	21-N	22-N	23-N	24-N
Ajax					1.50			1.00		1.50		2.00								
Auburn 6-66					1.50			1.00		1.50		2.25								
Buick	1.20	5.90	.65		1.80	2.75	1.00	.80	.85	3.50	3.00	8.25			1.25	5.00	3.00	20.00	1.50	
Cadillac			.75		2.25	4.50	2.25	1.50	1.75	4.00	3.25	27.00			1.50	6.75	3.75	24.75	1.50	
Case Y					2.25			1.00		.90		3.00								
Chandler	9.60	14.40	4.00	6.40	4.80	3.20	3.20	1.60	1.60	1.60	1.60	9.60			1.60	1.60	1.60		9.60	2.80
Chevrolet	.50		.25		1.25	1.25	.75	.75		2.50	2.00	4.75			.50	.50	.75	1.50		.75
Chrysler	3.50	5.75		8.00	2.75	2.50	1.50	1.00	.50	1.50	1.00	6.75	5.25	1.00	1.50	2.75	1.50	5.25	1.50	2.50
Cleveland	6.40	8.40	4.80	4.80	2.00	2.40	.80	1.00	.80	.40	1.00	6.40			1.00	1.60	.80	6.40	1.00	1.00
Davis 92	3.00	7.50	1.50	7.50	3.00	3.00	1.50	1.50	3.00	4.50	3.00	12.00			1.50	1.50	1.50	9.00	2.25	2.25
Diana					2.00			1.00		.75		2.25								
Dodge Brothers	3.00		.75		2.25	2.25	1.25	.75	.50	2.25	2.25	8.00			1.00	1.50	2.75	8.00	1.50	2.25
Durant	2.50		1.25	Time	1.20	1.50		.40		1.00		1.50					.50	.80	3.60	1.00
Elcar 6-67					2.25			.75		.50		2.25								
Essex 6	1.90		.80		2.30	2.30	2.30	1.50	.40	2.30	2.30	6.00			1.20	1.20	2.30	4.50	2.30	1.90
Ford	1.50		1.40		1.25		.75	.50		1.00	3.25	7.00				.75			1.00	
*Franklin 11	3.70		1.85	4.56	2.50	14.28	8.15	1.40	2.75	1.03	1.03	3.80			2.20	1.25	1.30	24.75	4.65	12.70
Gardner 6					2.00			.75		.50		2.25						8.25		
Hudson	1.90		.80		2.30	2.30	2.30	1.50	.40	2.30	2.30	6.00			1.20	1.90	2.30	4.50	2.30	3.00
Hupmobile 4	3.50		.75		2.25	2.00	1.50	.75		2.50	5.25	3.25			.75	1.20			2.25	
Hupmobile 6			2.25		1.40			2.75	1.50	2.25	.75	3.50					2.00			2.25
Hupmobile 8			4.60		1.95	4.60		2.70	4.50	2.25		6.00			.40	1.20				
Jewett (New Day)	9.75	9.75			2.25	1.50		.75	1.25		2.00	4.50	2.00		1.00	1.50	2.25	3.50	.75	2.50
Jordan 8	4.00	4.50	1.50	7.50	2.50	3.75	2.00	1.50	1.00	1.50	2.00	8.75			1.50	2.00	1.50	8.25	1.50	2.00
	5-N	6-N	7-N	8-N	9-N	10-N	11-N	12-N	13-N	14-N	15-N	16-N	17-N	18-N	19-N	20-N	21-N	22-N	23-N	24-N
Kissel 55					2.50			1.50		1.50		6.75								
Lincoln	3.00				3.00	4.00	2.25	1.50	.75	2.00	3.00				1.50					
Marmon	15.50	7.10				13.00		1.10	1.55	3.20										
Moon A	4.50	4.50	1.50	Time	2.00	3.75	2.00	1.00	1.00	4.00	2.75	16.00			1.00	1.50	2.25	16.00	1.20	4.00
Nash Adv.	3.25	3.50	1.50		1.75	2.50	1.25	1.00	.75		2.50	6.25			1.25	2.25	1.50	6.50	.75	3.00
Oakland	2.75	1.65	1.20		1.25	2.00	1.00	.75	.35	1.50	2.00	4.50	3.00		.75	2.15	1.00		.75	2.00
Oldsmobile	.75		1.25	6.00	.75	1.50	1.50	1.00	.50	.50	.75	6.00	3.75	.75		1.25	1.50	6.00	1.00	6.00
Overland 91-92	1.50		.75		1.60	1.25	1.75	1.00	.30	3.00	1.50	4.50			1.20		1.50	3.75	.75	
Packard 6	4.50	9.00	.75		4.95	4.50	.75	1.50	1.50	2.25	2.25	12.00	1.50		.75	1.50	1.95	12.50		5.55
Packard 8	4.50	9.00	.75		4.95	4.50	.75	1.50	1.50	2.25	2.75	12.00	1.50		.75	1.50	1.95	12.50		5.55
Palge 24-26	9.75	9.75			2.25	1.50		.75	1.25		2.00	4.50	2.00		1.00	1.50	2.25	3.50	.75	2.50
Peerless 8	3.00	3.00	1.50		1.50	3.00	1.50	.75	1.00	4.00	2.50	16.75			1.25	1.50	2.50	17.00	1.25	3.75
Pierce Arrow 80	5.00	9.00			2.50	4.50	3.00	1.50												
Pontiac					1.25			.85												
*Reo	8.75		2.50	6.50	2.50		11.50	.60		2.75	1.50					1.00	3.25	7.50	.75	10.75
Rickenbacker 6	3.00	6.00	1.50		2.25	.75	3.00	.90	.75	2.25	2.25	10.50				3.00	2.00		1.90	6.00
Star 4	2.50		1.25	Time	1.20	1.50		.40		1.00		1.50					.50	.80	3.60	1.00
Star 6	2.50		1.25	Time	1.20	1.50		.40		1.00		1.50					.50	.80	3.60	1.00
Stearns-Knight	3.50				3.00			1.00		3.00										
Studebaker Sp. & Big	4.75	7.00	1.20		1.75	3.00	2.25	1.00	1.25	3.50	3.00	10.00			1.20	1.50	2.40	9.50	1.50	
Studebaker Stand.	4.75	7.00	1.20		1.75	3.00	2.25	1.00	1.25	3.50	3.00	10.00			1.20	1.50	2.40	9.50	1.50	
Velle 60	2.50		1.50	Time	1.50	1.75	17.5	1.00	.75	2.75	1.75	1.00			.75	1.00	1.50	4.65	.75	
Wills St. Claire	4.50				4.90			1.50												
Willys Knight					2.00	3.00	3.00	1.00	.75	3.00	1.50	7.50			1.20			7.00	2.25	4.00

*Franklin and Reo prices include necessary materials. †Requires adjusting brake band.

Motor Age Flat Rate Manual

Wheel, Frame and Spring Operations

25-N. Remove and replace steering gear assembly.

Group O—Front wheels and rear wheels

1-O. Remove and replace, grease, adjust and tram front wheels.

2-O. Tram front wheels only.

3-O. Renew all cones and cups after 1-O.

4-O. Remove and replace one front wheel.

5-O. Remove and replace one rear wheel assembly.

Group P—Frame, frame brackets, front spring and rear spring

1-P. Renew one frame side rail.

2-P. Renew frame assembly.

3-P. Renew front tubular member.

4-P. Renew rear tubular member.

5-P. Remove, replace or renew front spring.

6-P. Renew front spring, front bolt and bushing.

7-P. Remove, replace and rebush front spring.

8-P. Renew front spring center bolt.

9-P. Renew all spring and bracket bolts and bushings.

10-P. Remove, replace or renew one rear spring.

11-P. Remove, replace and rebush rear spring.

12-P. Renew rear spring, rear bolt and bushing.

13-P. Renew rear spring center bolt.

14-P. Renew all rear spring shackles.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	25-N	1-O	2-O	3-O	4-O	5-O	1-P	2-P	3-P	4-P	5-P	6-P	7-P	8-P	9-P	10-P	11-P	12-P	13-P	14-P
Ajax	4.00	3.00	1.25	-----	1.00	1.25	-----	-----	-----	-----	1.90	-----	2.40	1.20	-----	1.90	2.50	-----	-----	-----
Auburn 6-66	-----	2.25	.75	-----	1.00	1.40	-----	-----	-----	-----	2.25	-----	3.40	1.50	-----	3.25	4.25	-----	-----	-----
Buick	3.25	2.25	1.30	4.75	.80	1.80	94.00	85.00	-----	-----	3.00	1.25	4.50	2.25	22.50	4.55	5.00	1.50	5.30	10.75
Cadillac	-----	2.60	1.00	.90	1.50	2.25	-----	-----	-----	-----	3.25	1.25	5.00	2.50	18.75	4.00	5.00	-----	-----	-----
Case Y	-----	2.25	1.00	-----	1.00	1.50	-----	-----	-----	-----	2.25	-----	3.50	2.25	-----	3.00	4.50	-----	-----	-----
Chandler	5.60	4.00	.80	3.20	1.60	2.40	-----	88.00	-----	-----	2.40	2.80	2.80	3.20	16.00	3.20	4.00	4.00	4.00	3.20
Chevrolet	2.75	2.25	.75	1.50	.75	.50	22.00	28.00	-----	-----	1.25	-----	-----	.75	-----	1.85	-----	3.00	.75	-----
Chrysler	2.75	2.50	1.20	.75	1.00	1.25	-----	68.00	-----	-----	1.50	.75	3.50	1.50	17.00	2.25	4.00	1.20	1.90	3.75
Cleveland	4.00	1.60	.80	1.20	1.00	1.00	-----	64.00	-----	-----	1.60	2.00	2.40	2.00	15.00	2.40	3.00	6.00	2.40	3.20
Davis 92	6.00	3.00	1.50	3.00	1.50	2.25	-----	54.00	15.00	22.00	2.25	2.25	4.50	2.25	18.00	3.00	4.50	3.00	3.00	4.50
Diana	-----	2.50	.75	-----	1.00	1.50	-----	-----	-----	-----	2.50	-----	4.00	1.50	-----	3.00	4.50	-----	-----	-----
Dodge Brothers	5.00	3.00	1.20	.75	.75	1.20	-----	65.00	-----	-----	2.25	1.90	3.75	1.90	13.75	3.00	4.50	1.50	1.90	2.25
Durant	2.00	1.30	.50	-----	.50	.75	Time	Time	Time	Time	1.50	1.90	1.65	.75	9.80	1.50	2.25	2.00	.75	.50
Elcar 6-67	-----	2.25	1.25	-----	.75	1.25	-----	-----	-----	-----	2.25	-----	3.40	1.50	-----	3.25	4.25	-----	-----	-----
Essex 6	2.30	2.30	.80	1.50	.80	1.50	-----	52.50	-----	-----	2.30	1.20	3.00	1.90	9.00	3.00	3.80	1.20	2.30	2.30
Ford	2.25	1.25	.50	.80	.50	.75	25.00	32.00	-----	-----	2.00	-----	3.00	2.00	-----	3.00	4.25	-----	3.50	2.25
*Franklin 11	3.95	2.70	1.30	19.52	1.40	.95	-----	-----	-----	-----	3.40	3.17	6.34	2.60	22.16	3.40	6.34	3.17	3.68	7.38
Gardner 6	-----	2.25	.75	-----	.75	1.25	-----	-----	-----	-----	2.25	-----	3.40	1.75	-----	8.00	4.25	-----	-----	-----
Hudson	3.00	2.30	.80	1.50	.80	1.50	-----	60.00	6.00	6.00	2.30	1.20	3.00	1.90	10.50	3.00	3.80	1.20	2.30	2.30
Hupmobile 4	2.75	2.50	.75	1.50	.75	1.50	-----	42.00	-----	-----	1.95	1.20	2.50	1.25	13.75	1.90	2.50	1.25	1.25	1.25
Hupmobile 6	2.75	4.00	1.25	1.50	2.25	1.25	-----	-----	-----	-----	1.75	-----	-----	1.25	-----	1.75	-----	-----	1.25	-----
Hupmobile 8	3.00	6.15	2.70	-----	2.70	1.20	-----	-----	-----	-----	1.90	-----	-----	1.20	-----	1.90	-----	-----	1.20	-----
Jewett (New Day)	-----	2.25	1.25	-----	.75	1.25	-----	Time	2.50	2.50	2.00	1.00	4.50	2.00	10.50	2.50	3.50	1.00	1.75	1.75
Jordan 8	5.00	2.00	.75	1.25	1.50	1.50	-----	100.00	5.00	8.00	2.50	2.00	4.00	1.50	15.50	3.00	4.50	2.25	2.50	8.50
Kissel 55	2.75	2.50	1.20	.75	1.00	1.25	-----	-----	-----	-----	2.50	-----	4.00	2.25	-----	4.50	5.00	-----	-----	-----
Lincoln	-----	6.00	1.50	3.00	1.50	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5.00	7.00	2.00	-----	-----
†Marmon	5.10	1.60	1.60	28.20	-----	1.65	-----	343.20	-----	-----	16.10	18.10	4.65	-----	45.10	-----	-----	-----	-----	-----
Moon A	6.00	2.75	1.50	4.50	1.00	1.25	-----	Time	-----	-----	2.50	2.50	4.50	2.25	3.75	4.50	6.50	3.75	2.50	2.50
Nash Adv.	4.75	3.00	1.25	1.25	1.00	1.25	-----	60.00	3.75	6.25	3.15	2.00	4.00	3.50	18.75	3.50	6.50	2.25	3.85	-----
Oakland	3.00	2.25	.75	2.25	.75	.90	-----	26.00	-----	-----	1.50	1.00	3.00	1.75	12.50	1.50	3.00	1.25	1.80	3.00
Oldsmobile	3.75	4.00	1.00	2.00	1.00	.50	-----	45.00	-----	-----	2.25	-----	2.25	2.00	2.25	2.25	3.00	-----	2.25	1.25
Overland 91-92	2.75	2.75	1.25	1.50	1.00	1.25	-----	-----	-----	-----	2.50	1.00	3.40	-----	9.00	2.25	3.00	1.50	.75	3.00
Packard 6	7.50	6.00	3.00	-----	1.50	1.50	-----	120.00	4.50	30.00	3.00	1.50	3.30	3.75	12.30	3.00	3.30	1.50	3.75	3.00
Packard 8	9.00	6.00	3.00	-----	1.50	1.50	-----	135.00	4.50	30.00	3.00	1.50	3.30	3.75	12.30	3.00	3.30	1.50	3.25	3.00
Paige 24-26	-----	2.25	1.25	-----	.75	1.25	-----	Time	2.50	2.50	2.00	1.00	4.50	2.00	10.50	2.50	3.50	1.00	1.75	1.75
Peerless 8	10.50	2.00	1.00	2.50	.75	1.25	-----	-----	3.00	-----	3.50	1.50	5.00	1.80	20.00	4.00	5.80	1.75	2.50	4.75
Pierce Arrow 80	-----	5.75	3.00	6.00	1.50	2.75	-----	-----	3.00	-----	3.75	1.50	5.50	1.75	24.00	-----	-----	-----	-----	-----
Pontiac	-----	2.00	.75	-----	.85	1.00	-----	-----	-----	-----	2.00	-----	3.00	2.00	-----	2.50	3.15	-----	-----	-----
*Reo	6.00	-----	-----	-----	.60	1.35	-----	152.00	-----	-----	10.25	3.50	-----	3.50	-----	15.00	-----	4.00	4.00	12.00
Rickenbacker 6	7.50	4.50	2.25	1.35	.90	1.50	-----	90.00	-----	-----	1.50	1.50	3.00	1.50	14.00	2.25	3.75	1.50	2.00	5.00
Star 4	2.00	1.30	.50	-----	.50	.75	Time	Time	Time	Time	1.50	1.90	1.65	.75	9.80	1.50	2.25	2.00	.75	.50
Star 6	2.00	1.30	.50	-----	.50	.75	Time	Time	Time	Time	1.50	1.90	1.65	.75	9.80	1.50	2.25	2.00	.75	.50
Stearns-Knight	7.50	2.50	1.25	-----	1.00	1.50	-----	-----	-----	-----	2.25	-----	2.00	-----	5.25	-----	-----	-----	-----	-----
Studebaker Spe Big 6	6.00	2.75	.75	3.00	1.00	1.50	-----	-----	-----	-----	3.00	1.75	4.50	3.00	20.00	4.50	6.00	2.00	4.50	5.00
Studebaker Stand.	6.00	2.75	.75	3.00	1.00	1.50	-----	-----	-----	-----	3.00	1.75	4.50	3.00	20.00	4.50	6.00	2.00	4.50	5.00
Vette 60	2.65	2.25	.75	2.75	1.00	1.25	Time	-----	-----	Time	2.50	1.50	3.50	2.50	16.00	2.75	4.00	1.50	3.50	5.00
Wills St. Claire 6	7.50	6.00	2.50	-----	1.50	1.50	-----	-----	-----	-----	2.25	-----	2.00	-----	2.75	-----	-----	1.25	3.00	2.65
Willys Knight	4.50	3.75	2.00	3.00	1.00	1.50	-----	-----	-----	-----	3.00	1.25	4.50	2.50	15.00	3.00	5.00	-----	-----	-----

*Franklin and Reo prices include necessary materials. †Marmon 9-P—Includes new shackles.

Motor Age Flat Rate Manual

Spring, Hood and Fender Operations

- 15-P. Rebush one front spring, rear bracket.
 16-P. Tighten all spring clips.
 17-P. Rebush rear spring, front bracket.
 18-P. Renew front spring clip.
 19-P. Tighten all clips, bolts and shackles.
 20-P. Adjust all shackles for side play.
 21-P. Remove and replace and clean one shackle bolt.
 22-P. Same as 21-P, bolt broken.
 23-P. Eliminate side and vertical play, one saddle.
 24-P. Remove spring saddle side play only.

Group Q—Hood, engine shield, fenders and running board and windshield

- 1-Q. Renew front fender.
 2-Q. Renew rear fender, regular.
 3-Q. Renew rear fender, special body.
 4-Q. Renew one running board.
 5-Q. Recover one running board.
 6-Q. Renew running board and splasher, one.
 7-Q. Renew splasher only.
 8-Q. Renew board, splasher and fender, one side.
 9-Q. Renew upper and lower windshield glass, closed.
 10-Q. Same as 9-Q, open body.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	15-P	16-P	17-P	18-P	19-P	20-P	21-P	22-P	23-P	24-P	1-Q	2-Q	3-Q	4-Q	5-Q	6-Q	7-Q	8-Q	9-Q	10-Q
Ajax		1.00		.75	2.15		.75				2.25	2.25		3.50		4.50				
Auburn 6-66		1.25		.50	2.50		.75				3.00	3.00								
Buick	3.00	.85		.75	2.00	1.00	.75	1.40	8.50	3.25	2.50	2.50		3.85	1.50	9.80	8.50	11.00	3.75	2.25
Cadillac		1.50		1.00	4.25	2.50	1.40	2.00			4.25	4.25		3.50	3.25	11.75	9.00	15.25	3.00	3.00
Case Y		1.00		.50	2.25		.75				3.75	3.00		3.50		6.00				
Chandler		4.80		.80	4.80		1.60				3.20	2.40	3.20	2.40	3.20	6.40	6.40	9.60	4.00	4.00
Chevrolet		.75		.60	.75				3.25	.20	1.50	1.25	1.75	1.20		2.25	1.50	5.75	1.50	1.50
Chrysler		1.50	1.25	.75	2.25	1.50	1.25	2.50			3.75	2.75		1.50	2.75	6.00	5.50	8.50	1.20	1.20
Cleveland	2.00	1.00	3.00	.40	1.00	.80	.80	1.20			2.00	2.00		1.60	2.40	5.20	5.20	7.20	2.00	2.00
Davis 92	3.00	1.50	4.50	.75	4.50	3.00	1.50	1.50			4.50	4.50	4.50	3.00	4.50	6.00	4.50	12.00	3.00	1.50
Diana		1.25		.75	2.75		.75				5.25	3.75								
Dodge Brothers	3.50	1.50	1.50	.75	1.50	1.35	1.25	2.50	2.25	1.00	3.00	3.00		3.00	1.50	4.50	1.50	9.00	1.90	1.90
Durant				.50	.75	.75	.60	.60			1.75	1.50		1.50		3.00	1.50	4.75	2.25	2.25
Eclair 6-67		1.25		.50	2.50		.75				3.00	3.00								
Essex 6	1.90	.80	1.90	.80	2.30	1.20	.80	1.20			2.70	1.50		2.70	2.30	5.70	5.70	7.30		
Ford		1.25		.70	1.50						1.50	1.25		1.50		3.50	2.00	4.50	2.00	1.50
*Franklin 11	3.17	1.80	3.17	1.16	1.80	1.95	1.32	1.32			29.95	19.45	25.45	11.45		22.35	10.90	71.75		
Gardner 6		1.25		.50	2.50		.75				3.00	3.00								
Hudson	1.90	.80	1.90	.80	2.30	1.20	.80	1.20			6.00	6.00		2.70	2.30	5.70	5.70	7.70		
Hupmobile 4	2.25	1.00	1.50	.75	2.25	1.25	.50	1.25			2.25	1.85	3.50	2.75	3.25				3.00	3.00
Hupmobile 6	2.25	.75		.75	2.50	.50	.75				2.50	2.00		2.25	1.75	3.50	2.25	5.00		2.25
Hupmobile 8		.75				.75	.75				3.75	1.20		2.25	2.25		2.40			
Jewett (New Day)	1.50	.75	1.50	.75	1.50		.75	1.25			2.00	1.25		2.25	1.50	3.75	2.25		.75	
Jordan 8		1.50		.75	4.25	1.50	.75	.75			5.25	3.75		3.00		14.50		15.00	2.00	1.50
Kissel 55		1.00		.50	2.40		.75				4.50	2.25								
Lincoln			2.00	.75	4.25	3.00	1.00	2.00			5.00	4.00		2.25		11.25	9.00	16.00		
Marmon		1.15		2.10	2.50	1.35					31.35	27.85		46.80	13.55					
Moon A	2.25	3.75		.75	2.75	2.00	.75	1.25			2.85	2.00		2.50	3.00	6.00	6.00	10.40		
Nash Adv.		1.50		.50	3.25		1.75				4.75	2.50		3.25		7.25	3.75	11.00		1.25
Oakland	1.50	.65	1.25	.50	2.40	1.50	.75	1.50			2.25	2.25		2.25	1.00	3.00	3.00	8.00	2.75	2.75
Oldsmobile	1.25	.75	1.50	.50	1.25	.50	.75	.75			3.00	3.00		3.00	2.25					
Overland 91-92		1.50		1.90			.75	1.50			2.75	2.75		1.75	3.75	3.75	1.90	7.50	2.00	1.50
Packard 6	1.50	1.50	1.50	1.50	3.75	1.50	.75	.75			6.00	3.30	3.00	4.50	6.00	6.75	6.75		5.25	5.25
Packard 8	1.50	1.50	1.50	1.50	3.75	1.50	.75	.75			6.00	3.30	3.00	4.50	6.00	6.75	6.75		5.25	5.25
Paige 24-26	1.50	1.25	1.50	.75	1.50		.75	1.25			2.25	1.50		2.25	1.50	3.75	2.25		.75	
Peerless 8		1.00		.75	4.25	3.00	1.25				3.75	3.75		1.75	3.25	8.00	7.00	14.50	3.00	2.75
Pierce Arrow 80		1.75		1.25	5.25		1.25				6.00	3.50		4.75	7.00	8.75	6.00	15.00		
Pontiac		.75		.50	2.00						2.25	2.00		2.25						
*Reo	5.75	1.50	6.30	.75	2.75	1.50	1.00	1.50			18.50	15.00		10.75					9.70	
Rickenbacker 6	2.00	1.25	1.50	.65	3.25	1.50	.75	.75			4.50	3.00			4.00	8.00	7.00	13.00	4.00	3.25
Star 4				.50	.75	.75	.60	.60			1.75	1.50		1.50		3.00	1.50	4.75	2.25	2.25
Star 6				.50	.75	.75	.60	.60			1.75	1.50		1.50		3.00	1.50	4.75	2.25	2.25
Stearns-Knight	1.25				3.00		1.00				5.50	2.50			3.25					
Studebaker Sp. & Big	1.25			.75	3.50	2.25	1.50	2.50			4.50	3.00		3.00	5.25	8.50	7.50	14.50	2.75	2.25
Studebaker Stand.		1.25		.75	3.50	2.25	1.50	2.50			4.50	3.00		3.00	5.25	8.50	7.50	14.50	2.75	2.25
Vellie 60	1.00	1.00		.75	2.75	1.25	.75	1.75			2.25	1.50	3.00	2.25	4.00	6.00	5.00	11.00	1.50	1.50
Wills St. Claire		1.00			3.00		.85				3.85	2.50			4.50					
Willys Knight	1.50	1.50		.75	3.50	2.00	1.25				3.50	3.00		3.50	3.00	7.50	6.00	12.75	3.00	3.00

*Franklin and Reo prices include necessary materials.

†Marmon—4-Q. Includes linoleum and binding; 5-Q. Includes new binding.

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Body, Top and Accessory Operations

11-Q. Remove and replace windshield assembly, open.

Group R—Floor boards, body, upholstery

1-R. Tighten all body bolts.

2-R. Renew one door striker.

3-R. Remove and replace body.

4-R. Renew front door glass.

5-R. Renew rear side glass.

6-R. Adjust door striker plate.

7-R. Remove and replace or renew tire carrier.

8-R. Renew one running board bracket.

9-R. Renew each additional running board bracket.

10-R. Straighten one running board bracket.

11-R. Renew entire top covering (open car).

12-R. Renew entire top covering (closed car).

13-R. Patch holes in top (normal).

Group S—Speedometer, shock absorbers, tires, etc.

1-S. Adjust all shock absorbers.

2-S. Renew or repair speedometer, flexible shaft.

3-S. Lubricate speedometer cable.

4-S. Renew speedometer driven gear.

5-S. Remove speedometer head.

6-S. Renew speedometer housing bushing.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	11-Q	1-R	2-R	3-R	4-R	5-R	6-R	7-R	8-R	9-R	10-R	11-R	12-R	13-R	1-S	2-S	3-S	4-S	5-S	6-S
Ajux		.75														.75	.75		.75	
Auburn 6-66		1.00														.75	.75		1.00	
Buick	2.50	1.25	.50	28.00	2.75	2.75	.25	3.00	1.60	1.60	1.60				2.00	1.10	.85			
Cadillac	2.00	1.60	.40		2.75	3.00		2.50	2.00						1.00	1.60	1.00			
Case V		1.00														1.00	.85		.75	
Chandler	3.20	1.60	.80	48.00	2.40	2.40	1.60	4.00	1.60	1.60	1.60	4.80	8.00		3.20	1.60	.80	1.60	.80	1.60
Chevrolet	1.25	.75	.35	8.00		.35	1.00					6.00	8.00		1.00	.75	.75		.50	
Chrysler	1.20	.75	.40	27.00	3.00	3.00	.30	1.20	1.75	1.75			13.00		.75	.75	.85			
Cleveland	2.00	1.00	.80	35.20	2.40	3.20	.40	5.60	2.40	.80	3.20	8.00	4.00	.80	2.00	.80	.40	.80	.40	.40
Davis 92	4.50	1.50	.75	22.00	3.00	4.50	.75	3.00	4.50		3.00				4.50	1.50	1.50	2.25	.75	3.00
Diana		1.25																		
Dodge Brothers	2.25	.75		28.00	1.90	1.90	.30		1.50						1.25	.75	.75		.50	
Durant	2.25	.60						1.50												
Elcar 6-67		1.00							3.40	.80							.80			
Essex 6		.80		21.00					2.00											
Ford	2.00	.75	.40	12.00	2.00	2.00														
*Franklin 11								12.31	2.65	2.65						7.50	1.50	3.24	1.23	
Gardner 6		1.00														.75	.75		1.00	
Hudson		.80		21.00				3.40	.80											
Hupmobile 4	1.50	.75	.40	28.00	3.00	3.00	.40	3.50	2.75				8.50		1.50	.75	.75		.50	
Hupmobile 6	1.50	.75						.75	1.50	1.50		5.75			1.25	.75	.75	2.25	.50	
Hupmobile 8	1.50	.75						.75	1.20			5.70				.75	.75		.40	
Jewett (New Day)	2.25	1.50	.40	11.50	4.50	3.00	.40	.75	3.00	3.00			9.50		1.25	1.00	.75	1.65	1.25	
Jordan 8	1.25	1.50		40.00	2.00	2.00		1.00	1.60	1.60			14.00			.75	.85			
	11-Q	1-R	2-R	3-R	4-R	5-R	6-R	7-R	8-R	9-R	10-R	11-R	12-R	13-R	1-S	2-S	3-S	4-S	5-S	6-S
Kissel 55		1.00														.75	.75		.50	
Lincoln	5.50	1.50					1.50	2.50							2.00	1.50	.75		1.00	
Marmon		1.00	.80					14.65								4.05	.50	2.65	.50	
Moon A	2.50	1.00	.50	39.00	2.30	2.30	2.00	2.00	1.60	1.60		5.00	8.50			1.50	.75	1.50	.75	1.50
Nash Adv.	.75	.75	.75	20.00			.75					6.25	9.50		1.25	.75	.75		.75	
Oakland	2.60	.75	.40	9.00	2.75	3.00	.30	2.25					8.25		1.00	.50	.75		.50	
Oldsmobile		2.00		6.75				1.50	3.00			6.00	8.50			.75	.75		.50	
Overland 91-92	1.90	1.00	.50	18.00	3.00	3.00	.30		1.50	1.50			6.00	1.00	.75	.65	.75		.50	
Packard 6	4.50	1.95	1.50	30.00	3.75	3.75			7.80	1.80	6.75	37.50	9.00	1.50	1.50	1.05	1.20	2.25	1.05	
Packard 8	4.50	1.95	1.50	30.00	3.75	3.75			7.80	1.80	6.75	37.50	9.00	1.50	1.50	1.05	1.20	2.25	1.05	
Paige 24-26	2.25	1.50	.40	11.50	4.50	3.00	.40	.75	3.00	3.00			9.50		1.25	1.00	.75	1.65	1.25	
Peerless 8	3.75	1.50	.75	30.00	3.00	3.00	.35	1.25	5.25			6.25			1.25	.75	.75		.75	
Pierce Arrow 80		1.50																		
Pontiac		.75																		
*Reo	3.50	1.50		24.00			.30		1.75				14.00		1.25	3.50	.80			
Rickenbacker 6	3.00	1.25		16.00	3.00	3.50	1.25		6.50	1.80	6.75		9.00	1.50	1.50	1.20	.75	2.00		
Star 4	2.25	.60						1.50												
Star 6	2.25	.60						1.50												
Stearns-Knight	3.00	1.00		28.00					4.50				9.00		1.50		.75		1.00	
Studebaker Sp. & Big		1.50		15.00	3.00	3.00	.50								1.25	.85	.85		1.25	
Studebaker Stand.		1.50		15.00	3.00	3.00	.50								1.25	.85	.85		1.25	
Vellie 60	1.50	1.25	.50	25.00	2.00	2.00	.25	1.00	1.50	1.50	1.50	4.00	7.00		1.25	.75	.75	1.50	.75	
Wills St. Claire	2.25	1.00		26.00					6.50						1.50	.75			.75	
Willys Knight	2.00	1.25	.75	27.00	3.00	3.25	.35						9.50	1.25	1.50	1.00	.75		1.00	
	11-Q	1-R	2-R	3-R	4-R	5-R	6-R	7-R	8-R	9-R	10-R	11-R	12-R	13-R	1-S	2-S	3-S	4-S	5-S	6-S

*Franklin and Reo prices include necessary materials.

Motor Age Flat Rate Manual

Miscellaneous Operations

- 7-S. Remove and replace one tire.
8-S. Renew all tire valve cores.

Group T—Miscellaneous Division

- 1-T. Remove and replace engine assembly.
2-T. Remove only engine assembly.
3-T. Reinstall only engine assembly.
4-T. Tighten all engine support bolts.
5-T. Wash and paint engine.
6-T. Tune engine, includes clean and adjust breaker points and spark plugs, V tank and carburetor, screens, check ignition timing, adjust carburetor, tappets and fan belt.
7-T. Clean carbon, grind valves after 6-T.
8-T. Overhaul engine as follows: Re-grind cylinders, fit piston assemblies, take up rods and mains, renew or ream valve

guides, overhaul carburetor and oil pump, clean and repaint, also includes 7-T and 14-B and re-grinding charge.

- 9-T. Overhaul same as 8-T plus renew main and rod bearings and fit to new or reground shaft.
10-T. Overhaul same as 8-T where cylinders are reamed, honed or bored.
11-T. Grease all pressure fittings.
12-T. Grease all grease cups.
13-T. Lubricate all oil cups and pressure fittings.
14-T. Lubricate springs, penetrating oil.
15-T. Drain, wash out and refill transmission.
16-T. Drain, wash out and refill differential.
17-T. Drain engine, refill fresh oil.
18-T. Spread and grease springs.

Suggested Prices for Operations Defined Above

Rates listed are in dollars on basis of labor charge at \$1.50 an hour

	7-S	8-S	1-T	2-T	3-T	4-T	5-T	6-T	7-T	8-T	9-T	10-T	11-T	12-T	13-T	14-T	15-T	16-T	17-T	18-T
Ajax	.50	.50	12.00	6.00	6.00	.50		2.50	7.00					1.75		.90	.75	.75		2.00
Auburn 6-68	.50	.50	12.50	5.50	7.00	1.00	3.25	3.50	7.50					2.00		.75	.75	.75		3.00
Buick	.75	.50	11.75	5.00	7.00	1.00	3.50	2.25	10.40	84.00	128.00	75.00	1.50		2.00		.75	1.00	.50	4.00
Cadillac		.75	18.50	8.50	10.00		5.75	4.25	20.00	140.00	150.00		1.50		2.50	1.00	1.00	1.00		4.25
Case Y	.50	.50	18.00			1.50		4.00	12.00	110.00	134.00				2.50	1.25	.75	.75		3.00
Chandler	.80		16.00			1.60	2.40	4.00	14.40	88.00	96.00	88.00			4.00		†1.80	†2.30	†2.80	
Chevrolet	.50	.50	6.25	2.25	4.00	1.25	1.50	1.50	5.25	50.00	56.00	35.00	2.00		2.25	.30	.30	.30	.30	1.50
Chrysler	.50	.50	15.00	6.50	9.50	2.50	4.50	2.25	10.50	68.00	75.00	61.00	1.50		2.25	.50	.75	.75	.40	
Cleveland	.80	.40	16.00	6.40	9.60	1.00	3.00	2.00	10.00	72.00	88.00	72.00			2.00	1.00	1.00	1.00	.40	14.40
Davis 92	.75	.50				.75	3.00	4.50		90.00	102.00	68.00	1.50	1.50	3.00	1.50	1.50	1.50	.75	4.50
Diana			25.00	10.00	15.00	1.50	4.00	4.25	12.00	120.00					2.00	.75	.75	.75		4.00
Dodge Brothers	.50	.50	15.00	6.00	9.00	.75	3.00	2.00	9.00	70.00	105.00	65.00	1.25	1.50	2.75	.75	.75	.75	.75	3.00
Durant			3.75	1.90	1.85	.75	2.00	2.50	4.75	46.70	61.70	40.70	.80		1.10	.40	.20	.20		
Elcar 6-67			12.75	5.50	7.25	1.00	3.50	3.50	7.50				2.00			.75	.75	.75		3.00
Essex 6			12.00			1.50	3.00	2.30		52.50	60.00					.80	.80	.80	.80	3.00
Ford	.50	.50	6.50	3.25	3.25	.75	2.00	.75	3.75	45.00	52.00	30.00			.75	.40		.50	.35	1.50
*Franklin 11	1.00		22.70				2.30	3.65	19.50	126.80	223.74						1.40	1.03	1.50	
Gardner 6	.50	.50	12.00			1.00	3.00	3.25	7.50						2.00	.75	.75	.75		3.00
Hudson			15.00			1.50	3.00	2.70		82.50	97.50					.80	.80	.80	.80	3.00
Hupmobile 4	.50	.50	14.00	5.50	8.50		2.75	2.75	9.50	72.00	106.00	65.00	.75		2.25	.75	.75	.50		2.25
Hupmobile 6	.50	.50	7.50	7.50		1.50	3.25	3.50	7.50				.75		2.25	.75	.50	1.25	.50	2.50
Hupmobile 8	.50	.50	21.50	9.00	13.50	.75	3.50	3.00	13.50				.75			.75	1.20	1.20		
Jewett (New Day)	.50	.50		5.50	7.50			3.50	5.00	42.00			.80	.80	.80		.75	1.00	.40	
Jordan 8	.50	.50	27.00	10.00	17.00	2.00	4.75	4.00	12.00	120.00	180.00		1.50		2.25	.75	.75	.75	.50	
	7-S	8-S	1-T	2-T	3-T	4-T	5-T	6-T	7-T	8-T	9-T	10-T	11-T	12-T	13-T	14-T	15-T	16-T	17-T	18-T
Kissel 55	.50	.50	16.00			1.00		4.00	12.50						2.25	.75	.75	.75		3.00
Lincoln	.75	.50	18.00	8.00	10.00		7.00	6.75	26.00	135.00	165.00				7.00	1.00	1.25	1.00		5.50
Marmon			12.75	5.50	7.25	1.00	3.40	3.15	15.50						1.60	2.55	2.80	3.30	7.10	
Moon A	.50	.50	15.00	7.00	8.00	1.25	2.75	2.00	10.50	75.00	110.00				3.00	2.00	.50	1.00	3.00	
Nash Adv.	.50	.50	18.75	8.00	10.75	.75	3.50	3.75	11.75	142.00	175.00	122.00	1.25		1.75	1.00	1.00	1.25	.35	3.50
Oakland	.50	.50	9.00	3.75	5.60		3.00	2.00	8.00	72.00	75.00	65.00	1.00	2.00	1.75	.60	.40	.40	.35	3.00
Oldsmobile	.50	.50	6.00	3.00	3.00	.75	2.50	1.25	7.00	72.00	78.00		1.50		.75	1.00	1.25		1.25	
Overland 91-92	.50	.50	10.25	3.40	6.80		3.00	2.00	8.00	50.00	68.00	41.00	.75		1.25	1.00	.65	.50		4.00
Packard 6	.75		22.50			1.00		3.45	2.25	60.00			1.50	1.50	1.50	.75	.75	1.20		
Packard 8	.75		33.00			1.00		4.50	2.70	67.50			1.50	1.50	1.50	.75	.75	1.20		
Paige 24-26	.50	.50		5.50	7.50			3.50	5.00	58.00			.80	.80	.80		.75	1.00	.40	
Peerless 8	.75	.50	16.00	7.00	9.00		5.50	3.75	18.00	118.00	155.00		1.50	.50	2.25	1.00	.75	.75		4.00
Pierce Arrow 80			15.00	6.00	9.00	1.25	5.00	3.75	15.00	136.00	175.00				1.50	1.00	1.25		5.00	
Pontiac			9.00			.75		3.00	8.00	75.00					2.00	.75	.75	.75		2.50
*Reo	.50		20.00	8.50	11.50		4.50	3.25	24.00	202.50			1.50	.50	2.25	1.00	.75	.75		3.00
Rickenbacker 6	.75	.50	21.00			1.00	4.25	3.00	8.00	65.00	105.00		1.50		1.50	.75	.75	.75		
Star 4			3.75	1.90	1.85	.75	2.00	2.50	4.25	39.70	54.70	33.70	.80		1.10	.40	.20	.20		
Star 6			4.50	2.25	2.25	.75	2.00	3.50	6.00	56.05	75.05	47.05	.80		1.10	.40	.20	.20		
†Stearns-Knight	.75	.50	18.00			1.00	3.50	2.75		92.00			1.25			1.00	1.20	1.20		4.00
Studebaker Sp. & Big 6	.50	.50	18.00	7.00	11.00	1.25	3.75	2.50	16.00	88.00	120.00		1.50		2.50	.85	.75	.75		4.00
Studebaker Stand.	.50	.50	16.00	7.00	9.00	1.25	3.75	2.00	16.00	84.00	112.00		1.50		2.50	.85	.75	.75		4.00
Vellie 60		.50	12.00	5.00	7.00	1.00	3.00	2.00	7.00	80.00	120.00	100.00	.50				.50	.50	Free	
Wills St. Claire 6	.75		18.00			1.00		**3.00	10.25				1.25			.75	.75	.75		
†Willys Knight	.50	.50	14.00			1.00	3.25	2.25		62.00	70.00		1.00		1.50	.75	.75	.75		
	7-S	8-S	1-T	2-T	3-T	4-T	5-T	6-T	7-T	8-T	9-T	10-T	11-T	12-T	13-T	14-T	15-T	16-T	17-T	18-T

*Franklin and Reo prices include necessary materials.

†Includes oil.

‡Does not include painting.

§Paige-Jewett—8-T. Overhaul to put engine in serviceable condition.

§Stearns Knight—8-T. Does not include grinding valves.

†Willys Knight—8-T. Does not include grinding valves.

**Does not include cleaning vacuum tank.



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Credit a Necessary Accessory in Three Out of Four Sales



FOR EVERY MOTOR VEHICLE
SOLD FOR CASH



THREE ARE SOLD ON
TIME PAYMENTS

\$530.00

\$765.00

\$280.00

\$380.00

NEW CAR NEW TRUCK USED CAR USED TRUCK
AVERAGE NOTE AT TIME OF PURCHASE IN 1925

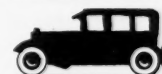
SALES INVOLVING TRADE-INS

SALES NOT
INVOLVING
TRADE-INS

80 USED CARS TRADED IN FOR EVERY 100 NEW CARS SOLD



FOR EACH NEW CAR
REPOSSESSION



TWO USED CARS ARE
REPOSSESSED

LONG TERM
REPOSSESSION
LOSSES COM-
PARED WITH
12 MONTHS
PAPER

MORE
THAN
18
MONTHLY
PAYMENTS

441%

16 TO 18
MONTHLY
PAYMENTS

157%

12
MONTHLY
PAYMENTS
BASIS OF
COMPARISON

Gist of Time Sales Policy of the National Association of Finance Companies

NEW CARS

Down payment of not less than one-third of the cash price or 30 per cent of the time price (including accessories) with maximum maturity of 12 months, balance to be paid in equal monthly installments.

USED CARS

Down payment of not less than 40 per cent of the cash price or 37 per cent of the time price (including accessories) with maximum maturity of 12 months, to be paid in equal monthly installments.

NEW CAR REPOS-
SESSION RATIO
ON BASIS OF
DOWN PAYMENTS

LESS
THAN
1/4
DOWN
PAYMENT

537%
GREATER

1/3 DOWN
PAYMENT

BASIS OF
COMPARISON

1/4 DOWN
PAYMENT

121.5%
GREATER

USED CAR REPOSSES-
SION ON BASIS OF
DOWN PAYMENT

REPOSSESSION LOSS RATIOS ON BASIS OF DOWN PAYMENTS AND TIME EXTENSIONS

LOSS RATIO
4.84%

40%
DOWN
PAYMENT

LESS THAN
37% DOWN
PAYMENT
104 2/3%
GREATER

LOSS RATIO
.536%

40% DOWN
12 MONTHS

LOSS RATIO
1.1%

LESS THAN
37% DOWN
12 MONTHS

LOSS RATIO
.839%

40% DOWN
16-18 MONTHS

LOSS RATIO
1.716%

LESS THAN
37% DOWN
16-18 MONTHS

LOSS RATIO
2.357%

40% DOWN
OVER 18 MONTHS

LESS THAN
37% DOWN
OVER 18 MONTHS

IMPORTANT FACTORS BEARING ON TIME SALE SITUATION IN 1925

Total wholesale value of cars and trucks	\$3,000,000,000.00
Dealers gross discount to cover all expenses and net profits	800,000,000.00
War excise taxes	100,000,000.00
Freight and Delivery charges	200,000,000.00
Total retail value of cars and trucks	\$4,100,000,000.00
Total value motor vehicles sold for cash	\$1,000,000,000.00
Total value motor vehicles sold on installment plan	\$3,100,000,000.00
Total amount of cash down payment	\$1,000,000,000.00
Total amount deferred payment on new cars	\$2,100,000,000.00
Total amount deferred payment on used cars	900,000,000.00
Total volume new and used car paper financed during year	\$3,000,000,000.00
Total amount of paper outstanding at a given time	\$1,500,000,000.00

PERCENTAGE OF USED
CAR AND NEW CAR PAPER
HANDLED BY COMPANIES
HANDLING BOTH CLASSES

USED CAR
PAPER
30%

NEW CAR
PAPER
70%

CHARTS FROM DATA COMPILED BY C.C. HANCH
GENERAL MANAGER, NATIONAL ASSOCIATION
OF FINANCE COMPANIES

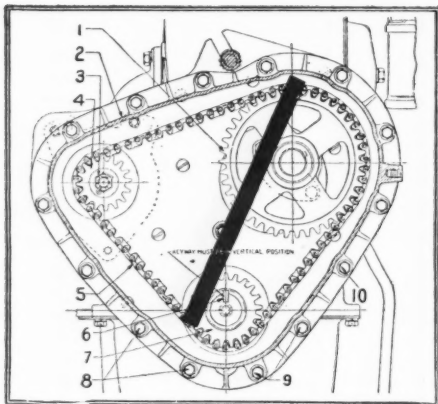


Fig. 1—Rocking the generator around the lower clamp bolt tightens the chain on the Hupmobile

PROPER attention to the front end chain can best be given when a periodic inspection and lubrication plan is sold to the customer at the same time the car is sold. Then in those cases where adjustment is not automatic, the mechanic making the inspection can quickly take up any slack that has developed when the car has run from 500 to 1,000 miles. After that, attention at intervals of 3,000 or 4,000 miles should be sufficient.

In other cases it may not always be possible to keep track of the frequency with which chain adjustment has been made or checked and for this reason mechanics should make a practice of checking each car they work on. One of the simplest methods is to rock the generator or pump coupling on cars where this is possible. Nearly all chain drives are essentially triangular, the

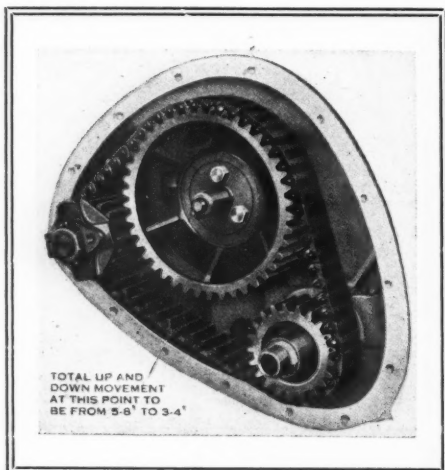


Fig. 2—Hudson chain layout showing method of checking for proper tension

chain going over the crankshaft, the camshaft and the generator sprocket. In some cases the third sprocket drives the pump or other subsidiary unit, but the principle is the same.

The movement at the generator or pump shaft should not exceed 1/16 in. and this can be checked by rocking the shaft as far as it will go in one direction and making pencil marks on the

Servicing Front

How Adjustment and Replacement Operations Are Performed on the Various Types in General Use on Current Model Automobiles

By A. H. PACKER

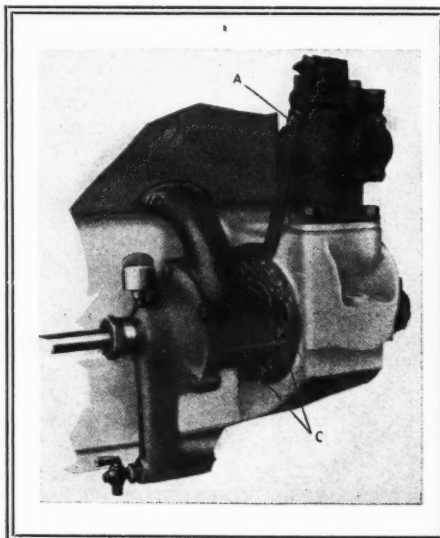
shaft and the generator end bracket, then rocking the shaft the other way to check the amount of the movement.

Making the Adjustment.—One of the common methods of making the chain adjustment is to rock the generator away from the engine. This is done when the generator is flange mounted, for the flange has three holes in it, the upper two being slotted. When the three nuts or cap screws are loosened, it is then possible to rock the generator about the lower screw, which acts as a pivot until the proper chain tension is obtained, after which all screws are tightened.

There are several ways to check the proper chain tension. One method is to loosen the clamp bolts and hold the generator away from the engine while someone starts the engine and operates it at moderate speed. While this is being done the generator is pulled outward until the chain makes a humming noise showing it is a little too tight. The generator is then allowed to go in slightly until the humming noise just disappears. This is the proper position and the bolts are tightened to hold it there.

Fig. 1 shows the chain layout of the series R Hupmobile, the outline of the generator flange being shown at the left side of this illustration. On some cars there is a set screw provided which makes it possible to gradually move the generator outward after the nuts have been loosened. This set screw would be in the upper left hand ear of the gen-

Fig. 3—The eccentric bushing is used to tighten the chain on Hudson cars



erator flange as seen in Fig 1 and would bear against the cap screw or bolt so as to push the generator out.

Another method of checking to get the right amount of slack in the chain is to measure the up and down movement. In Fig. 2 is shown the front end drive of Hudson cars, it being indicated that a movement of from 5/8 in. to 3/4 in. is permissible. On some cars however this

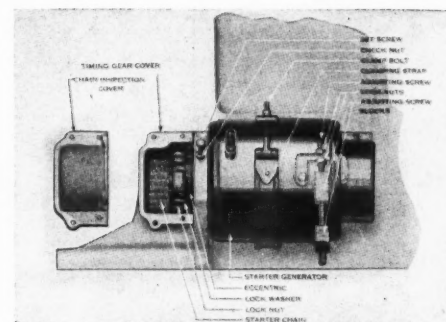


Fig. 4—Dodge Brothers cars use an eccentric bushing to change position of starter generator and thus tighten the chain

figure is given as from 3/8 in. to 1/2 in. On Franklin series 10 cars there is a hole provided through which a hooked wire can be inserted. This hole is at the top of the chain case between the camshaft and generator and makes it possible to lift the upper left portion of the chain and check the slack.

On Cadillac cars the chain adjustment is determined by rocking the fan back and forth as much as possible without slipping the fan clutch. If the movement at the rim of the fan exceeds 1 in., adjustment is considered advisable and in no case should the movement be greater than 2 in.

In addition to the adjustment by means of generator movement, there is another common method. This is often used in cases where the drive goes first to the pump, which being rigidly attached to the cylinder block can not be rocked back and forth. In these cases the sprocket is usually mounted on an eccentric bushing, movement of which changes the sprocket position and hence tightens the chain. As the pump shaft is maintained in a certain position while the center of the sprocket is moveable, it is necessary to provide an Oldham coupling or similar construction to take care of the misalignment. Such a coupling is shown in Fig. 2 at the extreme left.

End Chains—

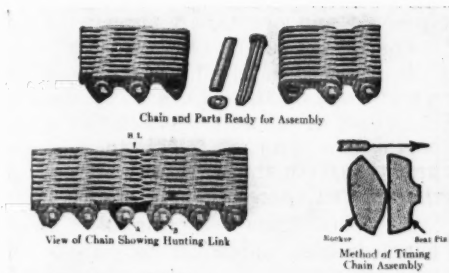


Fig. 5—Removing the hunting link gives the Morse chain a new period of usefulness

In Fig. 3 is shown the external appearance of the eccentric bushing adjustment as used on Hudson cars. In this case the three bolts "C" are removed and a spanner wrench is used to rock the bushing. When proper tension is attained the bolts are replaced. Other cars have similar installations the details of which are best obtained from the instruction book which comes with the car.

On Lincoln cars the adjustment is effected with the aid of two spanner wrenches which are provided with the car. One of these is used to barely loosen a large steel lock nut while the other is used to hold the bronze driving shaft bearing. When the lock nut has been loosened, the other wrench is also used to pull the bearing out away from the engine so as to tighten the chain, after which the lock nut is again tightened. On Lincoln cars an up and down movement of not less than $\frac{1}{2}$ in. and not more than $\frac{3}{4}$ in. is recommended.

On Dodge Brothers cars the front end chain operates the starter generator, the

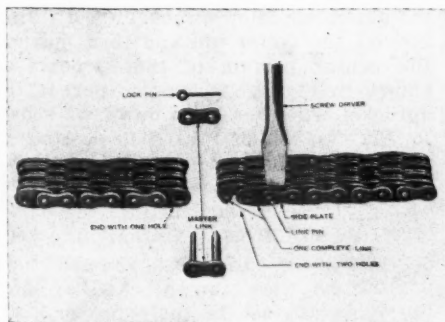


Fig. 6—Method of removing a complete link from a Whitney chain

adjustment being taken care of by means of an eccentric bushing which changes the position of this unit with respect to the engine.

Adjustment is accomplished by taking off the chain inspection cover, loosening the set screw and check nut, also the large castellated nut on the eccentric bushing, after which the bushing may be rotated. The details referred to are shown in Fig. 4. After the generator has been moved out to tighten the chain it is necessary to readjust the supporting V

blocks behind the generator so that they just come into contact with the frame of the machine. Improper adjustment of the V blocks will throw the generator sprocket out of line with the sprocket on the crankshaft and give noisy chain operation.

Shortening the Chain.—When the limit of adjustment of a front end chain has been reached it is possible in some cases to remove what is known as a hunting link. This can be done on Morse chains as indicated in Fig. 5. To do this, turn the engine until the hunting link is on top of a sprocket. Then use a chisel to split washers A and B, which are thus

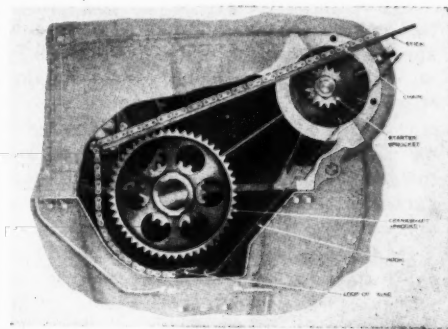


Fig. 7—Simple method of replacing a chain on Dodge Brothers car

removed. The two pins may then be driven out which makes it possible to take out the hunting link.

Next bring the two ends of the chain together, lapping the link plates in regular order. Insert seat pin (with washer riveted on one end) from far side of chain, taking care that the ribbed side of pin points in the direction of chain travel. (See lower right hand sketch of Fig. 5.) Insert rocker pin from near side of chain with the pointed side of the rocker pin also pointing with the direction of travel which will make it bear against the flat side of the seat pin. Place washer on end of seat pin, back up with bar or wedge and rivet end of pin with a few sharp hammer blows.

On Dodge Brothers cars with Whitney chain it is necessary to remove a complete link in order to shorten the chain. A complete link consists of one wide and one narrow half link. This practice is not recommended for it makes the chain fit the sprockets imperfectly which produces a certain amount of noise. If this is not considered objectionable, however, it does make it possible to get many extra miles of service from the old chain.

To remove the link the chain inspection cover (Fig. 4) should be removed, the V blocks backed off and the eccentric bushing turned to make the chain as loose as possible. Turn engine until master link is on top of generator sprocket. Take out master link lock pin and remove this link. Remove chain from engine by holding ends of chain

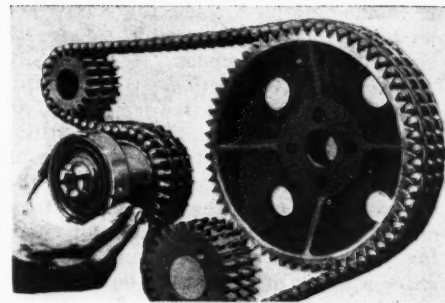


Fig. 9—Removing the cotter pin makes it possible to pull out the center portion of the Link Belt automatic idler

and turning engine by hand to release chain from crankshaft sprocket. With master link removed, one end of chain will show ONE hole and the other will show TWO holes. File off the two rivet heads (Fig. 6) at the END OF THE CHAIN WITH TWO HOLES and pull out the side plate with the two link pins thus released.

With a screwdriver pry the plates apart at the point shown (third hole from the end) to release the bushings. DO NOT TRY TO DRIVE OUT THE BUSHINGS WITH A DRIFT. When the bushings are out the link is removed and the chain is ready to be installed again on the engine.

Installing Dodge Brothers Chain.—Replacing the Whitney chain in a Dodge Brothers engine is simple enough if you know how, the recommended method being shown in Fig. 7. With this method it is NOT necessary to remove the timing gear cover. A loop of wire is put in one end of the chain and a yard stick is used as indicated to work the chain over the sprocket. A long stiff wire with a hook at one end is then used to catch the wire loop at the end of the chain and pull it up, after which both ends may be brought together on top of the generator sprocket.

Chain Replacement.—The mileage that a chain will give depends on the treatment it receives to a great extent. The life will be shortened if suitable lubricant is not used, if the choke is used so much that oil is rapidly diluted, if oil is not replaced at recommended intervals and if the engine pan is not occasionally washed out.

The need of replacement will be occasioned by a number of things. If a chain is used too long it may break. Breakage may also be caused by failure to make necessary adjustments in which case the chain may climb and ride the sprocket teeth which may cause breakage. If breakage has occurred, the chain compartment should be carefully inspected after the cover is removed to make sure no pieces of the old chain are left in the engine.

Excessive elongation of the chain due to wear at the different joints is also cause for replacement, especially after one link has been removed to effect a temporary repair. Elongation will be noticed by the noisy operation which is caused by chain failing to fit the sprocket.

SERVICING FRONT END CHAINS

It is also noticed when the adjustment no longer makes it possible to give the chain the proper tension.

Checking Valve Timing.—It is generally best to check the relative position of the sprockets while the old chain is still in place and if possible to block the crankshaft and camshaft sprockets so they can not turn before the old chain is taken off. This will save the trouble of checking up on the valve timing. In some cases a block of wood may be driven between the crankshaft and camshaft sprockets so as to hold them in their relative positions.

Where the timing has been lost it is possible to use the flywheel markings on most cars. It is general practice to mark "DC 1&6" or some similar designation to show the dead center position. This can also be determined by checking the position of the piston and turning the engine until the piston is at the top of its stroke.

The closing of the exhaust valve and the opening of the intake occurs very near the dead center position of the flywheel, so that it will usually be found that there is near the dead center mark on the flywheel another mark which may be "I.O. 1&6," indicating that that is the position in which the intake valves of the No. 1 and No. 6 cylinders should open. There should also be found marks "E.C. 1&6" indicating the position at which the exhaust valve closes for these cylinders.

Most engines are timed nearly alike so that the point on the flywheel at which the exhaust valve closes will be between the dead center position and a point about one inch or so past dead center. For this reason a close approximation can be made even if the engine has no markings of any sort. Then when it is time to mesh the chain with the sprockets it will be found that the pitch of the chain is coarse enough in most cases to either give the right timing or to throw the timing out enough so that it is readily evident that something is wrong, in which case a change of one tooth usually gives the correct timing.

Where instruction books are available, the specific directions there given should be followed, as in some cases this makes the job a little simpler. A number of such instructions are here given:

Cadillac V63 and Type 61.—The "o" mark on camshaft sprocket down. The two "o" marks on crankshaft sprocket up. A straight line between the two shafts should go through the center of the one "o" and between the other two "o" marks.

Chrysler 70 and 80.—The "o" mark on camshaft gear points toward center of crankshaft and the "o" mark on crankshaft gear points toward center of camshaft. This puts these two marks together and in line with the shaft centers.

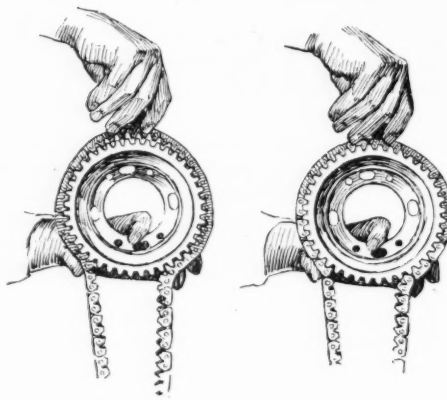


Fig. 8—The new chain should not pull away from the sprocket. If it does it indicates excessive sprocket wear

Cleveland 43.—Same as for Chrysler.

Franklin Series 10.—Align the two letters "o" on camshaft flange and camshaft sprocket. Then align the two letters "I" on crankshaft sprocket and camshaft sprocket.

Gardner 6 and 8.—Prick punch marks on camshaft and crankshaft sprockets toward each other. Mark on crankshaft sprocket between marks of camshaft sprocket.

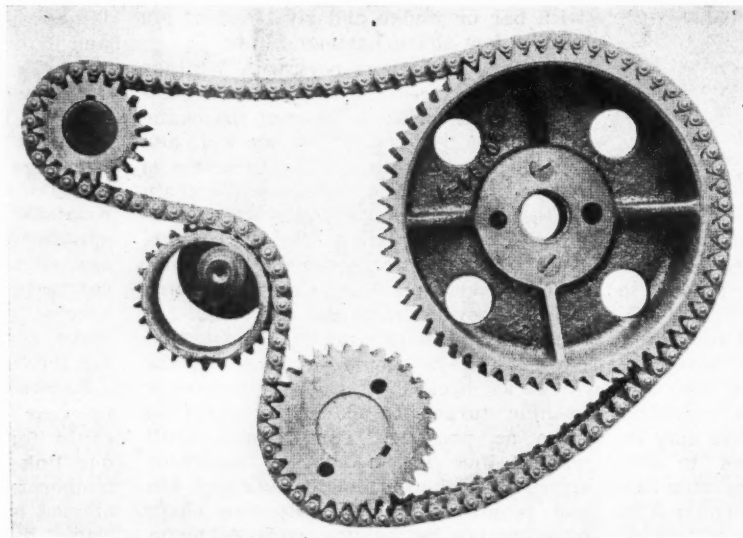
Hudson.—Crankshaft sprocket and camshaft sprocket each have two teeth punch marked. Chain has two rivets punch marked. One rivet mark goes between punch marked teeth of one sprocket while other punch marked rivet of the chain goes between marked teeth of the other sprocket.

Hupmobile.—Set flywheel on dead center. Place scale or straight edge across camshaft sprocket as shown in Fig. 1 and line up the cross marks.

Jewett.—Same as Chrysler.

Jordan A.—Measuring along chain the distance between punch mark on camshaft sprocket and the mark on crankshaft sprocket should be 5½ in.

Fig. 10.—With center portion of automatic idler sprocket taken out, the outer portion can be removed and the chain lifted from the other sprockets



Kissel.—Line up timing marks on crankshaft and camshaft sprockets.

Lexington.—Set flywheel at marks indicating intake opening and exhaust closing for the No. 1 and No. 6 cylinders. Then line up punch marks on camshaft sprocket and crankshaft sprocket.

Lincoln.—Same as Chrysler.

Moon.—Set on dead center, using flywheel marks. Have 10 teeth in chain at right side of triangle between "o" marks on the two sprockets. This includes the first two teeth that are fully engaged in the marked spaces of both sprockets.

Oakland.—Same as Chrysler except punch marks instead of "o" marks are used.

Paige.—Same as Chrysler.

Star.—Crankshaft sprocket has two teeth marked "o". One mark should be down and to the right, the other down and to the left, which gives dead center position as can be checked with the flywheel marks. Now counting the chain teeth, there should be 17 between marks on crankshaft and generator sprocket and 10 between crankshaft and camshaft sprocket marks, including the teeth at the marks.

Installing New Sprockets and Chains.—When a new chain is installed it should be checked on the old sprocket to see if the operation will be satisfactory or not. If the sprocket is badly worn, the chain will not fit and will give noisy operation. The right and wrong way for the chain to fit are shown in Fig. 8.

In replacing a Morse chain it is necessary to install it so that it runs in the direction indicated by the arrows. If this is not done the chain will be rapidly ruined.

Installing Link Belt Chain.—The removal of an old Link Belt chain can be accomplished with the front cover of the chain case removed, without taking the chain apart. This necessitates taking the automatic idler sprocket apart. First remove the cotter pin and then pull out the center portion of the sprocket as shown in Fig. 9. The outer part of the sprocket will then drop down, as shown in Fig. 10, which makes it possible to slip it out from under the chain. There is then enough slack to permit lifting the chain from the other sprockets.

In putting the new chain on, the sprockets are first set in their proper positions to give the correct valve timing and the chain is put on so that there is no slack between the crankshaft and camshaft sprockets. The outer part of the idler sprocket is then put in place and the center portion applied. The eccentric bushing is then turned until all slack in the chain is taken up, after which the spring is wound up one and a half turns and a new cotter pin is installed.

Timing Chains for Passenger Cars

Car Make	Model	Year	Make of Chain	Unit Driven	Guide Type	Pitch	Width	Length Links	Inches	Type of Adjustment
Apperson.....	St. Away 8	1925-26	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
Auburn.....	6-43	1922-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	67	$33\frac{1}{2}$	Gen.
Auburn.....	6-66	1925-26	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{2}$	90	$33\frac{3}{4}$	Gen.
Auburn.....	6-66	1925-26	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	89	$33\frac{3}{4}$	Auto.
Auburn.....	8-88	1925-26	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
Cadillac.....	59-61	1919-22	Mor.	Cam Shaft	C	$\frac{1}{2}$	$1\frac{1}{2}$	54	27	Ecc.
Cadillac.....	59-61	1919-22	Mor.	Gen. & Fan.	C	$\frac{1}{2}$	$1\frac{1}{4}$	55	$27\frac{1}{2}$	Ecc.
Cadillac.....	V-63	1923-25	Mor.	Camshaft	C	$\frac{1}{2}$	$1\frac{1}{4}$	56	28	None
Cadillac.....	V-63	1923-25	Mor.	Gen. & Fan.	C	$\frac{1}{2}$	$1\frac{1}{2}$	57	$28\frac{1}{2}$	None
Cadillac.....	314	1926	Mor.	Cam. & Acc.	C	$\frac{3}{8}$	$1\frac{1}{4}$	88	33	Auto.
Case.....	W-Y	1922-24	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	65	$32\frac{1}{2}$	Gen.
Case.....	W-Y	1922-25	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	66	33	Gen.
Chalmers.....	35 B-C	1918-24	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	71	$35\frac{1}{2}$	Gen.
Chandler.....	32, 33, 35	1923-26	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	77	$38\frac{1}{2}$	Ecc.
Chrysler.....	70	1924-26	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	59	$29\frac{1}{2}$	Gen.
Chrysler.....	80	1925-26	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{2}$	78	31.2	Gen.
Cleveland.....	31	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	59	$29\frac{1}{2}$	Gen.
Cleveland.....	43	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	61	$30\frac{1}{2}$	Gen.
Davis.....	71-90	1922-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	67	$33\frac{1}{2}$	Gen.
Davis.....	92	1926	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{4}$	82	32.8	Gen.
Davis.....	93	1926	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{4}$	81	32.4	Gen.
Diana.....	8	1925-26	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{4}$	76	$28\frac{1}{2}$	Gen.
Dodge Bros.....	4	1918-25	Whit.	Starter-Gen.	S	$\frac{3}{8}$	$\frac{3}{4}$	82	$30\frac{3}{4}$	Ecc.
Elcar.....	6-50	1922-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	67	$33\frac{1}{2}$	Gen.
Elcar.....	6-65	1926	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{2}$	90	$33\frac{3}{4}$	Gen.
Elcar.....	8-80	1925-26	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Gen.
Essex.....	4	1922-23	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{4}$	65	$32\frac{1}{2}$	Ecc.
Essex.....	6	1924-26	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{4}$	57	$28\frac{1}{2}$	Ecc.
Flint.....	40 or 60	1923-26	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	63	$31\frac{1}{2}$	Gen.
Flint.....	55 or 80	1923-26	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	73	$36\frac{1}{2}$	Gen.
Flint.....	Jr. 6	1926	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{4}$	81	32.4	Gen.
Franklin.....	10 (to 85682)	1921-24	Whit.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{4}$	75	$28\frac{1}{2}$	Gen.
Franklin.....	10 to (abv. 85682)	1921-24	Whit.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	57	$28\frac{1}{2}$	Gen.
Franklin.....	11	1926	Ram.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	57	$28\frac{1}{2}$	Gen.
Gardner.....	6	1925-26	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{4}$	98	$36\frac{3}{4}$	Auto.
Gardner.....	8	1925-26	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
Haynes.....	75-77	1922-25	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	108	$40\frac{1}{2}$	Auto.
Hertz.....	D-1	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	65	$32\frac{1}{2}$	Gen.
Hertz.....	D-1	1926	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{4}$	92	$34\frac{1}{2}$	Gen.
Hudson.....	Super 6	1922-26	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	63	$31\frac{1}{2}$	Ecc.
Hupmobile.....	R	1923-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	75	$37\frac{1}{2}$	Gen.
Hupmobile.....	A	1926	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{4}$	82	$30\frac{3}{4}$	Gen.
Hupmobile.....	E	1925-26	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{2}$	96	36	Gen.
Jewett.....	23-25	1925	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	106	$39\frac{3}{4}$	Auto.
Jewett.....	New Day	1926	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{4}$	89	$33\frac{3}{8}$	Gen.
Jordan.....	MX-H-K-L	1922-25	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	64	32	Acc.
Jordan.....	8-A	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	67	$33\frac{1}{2}$	Gen.
Jordan.....	J	1926	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	63	$31\frac{1}{2}$	Gen.
Kissel.....	6-55	1926	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	84	$31\frac{1}{2}$	Auto.
Kissel.....	8-75	1926	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
Lexington.....	M-M	1923-25	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	124	$46\frac{1}{2}$	Auto.
Lexington.....	Concord	1926	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	124	$46\frac{1}{2}$	Auto.
Lincoln.....	8	1920-26	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	77	$38\frac{1}{2}$	Acc.
Locomobile.....	Jr. 8	1925	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	102	$38\frac{3}{4}$	Auto.
Locomobile.....	90	1925	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{11}{16}$	112	42	Auto.
McFarlan.....	Str. 8	1926	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
McFarlan.....	S.V.	1925-26	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	112	42	Auto.
Moon.....	6-40	1922-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	67	$33\frac{1}{2}$	Gen.
Moon.....	A	1924-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	63	$31\frac{1}{2}$	Gen.
Oakland.....	6	1924-26	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	59	$29\frac{1}{2}$	Gen.
Oldsmobile.....	30	1926	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	59	$29\frac{1}{2}$	Gen.
Packard.....	6	1920-24	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	59	$29\frac{1}{2}$	Gen.
Packard.....	6	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	63	$31\frac{1}{2}$	Gen.
Packard.....	8	1923-25	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{2}$	63	$31\frac{1}{2}$	Gen.
Paige.....	6-70 (L)	1923-24	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	110	$41\frac{1}{4}$	Auto.
Paige.....	21-24	1923-25	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	108	$40\frac{1}{2}$	Auto.
Paige.....	6-72	1926	L-B	Cam & Acc.	B	$\frac{3}{8}$	$1\frac{1}{2}$	106	$39\frac{3}{4}$	Auto.
Peerless.....	72	1925	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{2}$	84	$31\frac{1}{2}$	Gen.
Peerless.....	6-80	1926	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{4}$	82	32.8	Gen.
Pierce-Arrow.....	80	1925	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	96	36	Auto.
Reo.....	T-6	1921-24	Whit.	Starter	S	.....	.....	60	$37\frac{1}{2}$	None
Rickenbacker.....	6-D, B-8	1925	L-B	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{2}$	94	$35\frac{1}{4}$	Gen.
Rickenbacker.....	6-E, B-8	1926	Mor.	Cam & Gen.	C	$\frac{3}{8}$	$1\frac{1}{4}$	94	$35\frac{1}{4}$	Gen.
Roamer.....	8	1925	L-B	Cam & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	100	$37\frac{1}{2}$	Auto.
Star.....	4	1925	Mor.	Cam & Gen.	C	$\frac{1}{2}$	$1\frac{1}{4}$	63	$31\frac{1}{2}$	Gen.
Star.....	6	1926	Mor.	Cam & Gen.	C	$\frac{4}{10}$	$1\frac{1}{4}$	81	32.4	Gen.
Stearns Knight.....	Sk. 6	1919-25	Mor.	Ecc. Shaft	C	$\frac{1}{2}$	$1\frac{1}{2}$	52	26	None
Stearns Knight.....	Sk. 6	1919-25	Mor.	Generator	C	$\frac{1}{2}$	1	56	28	None
Stearns Knight.....	C	1924-25	Mor.	Ecc. Shaft	C	$\frac{1}{2}$	$1\frac{1}{2}$	52	26	None
Stearns Knight.....	C	1924-25	Mor.	Generator	C	$\frac{1}{2}$	1	54	27	None
Stearns Knight.....	B-4	1924-25	Mor.	Ecc. Shaft	C	$\frac{1}{2}$	$1\frac{1}{4}$	54	27	None
Stearns Knight.....	B-4	1924-25	Mor.	Generator	C	$\frac{1}{2}$	1	56	28	None
Studebaker.....	Std. 6	1920-26	Mor.	Cam. & Acc.	C	$\frac{1}{2}$	$1\frac{1}{2}$	71	$35\frac{1}{2}$	Acc.
Willys Knight.....	64	1924-26	L-B	Ecc. Shaft	S	$\frac{3}{8}$	$1\frac{1}{4}$	84	$31\frac{1}{2}$	Idler
Willys Knight.....	64	1924-26	L-B	Generator	S	$\frac{3}{8}$	$\frac{3}{4}$	21	7 $\frac{7}{8}$	None
Willys Knight.....	66	1925-26	L-B	Ecc. & Gen.	B	$\frac{3}{8}$	$1\frac{1}{2}$	110	$41\frac{1}{4}$	Auto.
Willys Knight.....	70	1926	L-B	Ecc. & Gen.	B	$\frac{3}{8}$	$1\frac{1}{4}$	98	$36\frac{3}{4}$	Auto.

ABBREVIATIONS

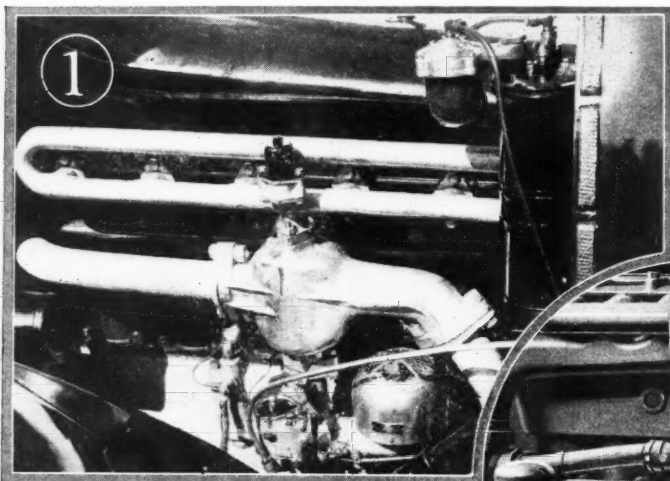
L-B—Link Belt.
 Mor.—Morse.
 Whit.—Whitney.
 Ram.—Ramsey.
 Cam & Acc.—Camshaft and accessory shaft.

Cam & Gen.—Camshaft and generator shaft.
 Gen. & Fan.—Generator and fan shaft.
 Ecc. Shaft.—Eccentric shaft.
 Ecc. & Gen.—Eccentric shaft and generator shaft.
 B—Back

C—Center.
 S—Side.

TYPE OF ADJUSTMENT

Auto.—Automatic idler.
 Gen.—Generator shifted.
 Ecc.—Eccentric bushing.
 Idler.—Manual adjustment of idler.



1. The gasoline filter keeps water and dirt out of the carburetor and stops trouble before it happens. The hot spot manifold vaporizes the fuel better, giving better efficiency and reducing crank-case dilution.

2. The air cleaner keeps the dirt out of the fuel mixture and reduces wear on cylinders and bearings.

3. Keeping the steering gear tight reduces the tendency for the front wheels to shimmy.

4. The layout of the four wheel brakes should be understood so that lubrication and adjustment may be properly taken care of.

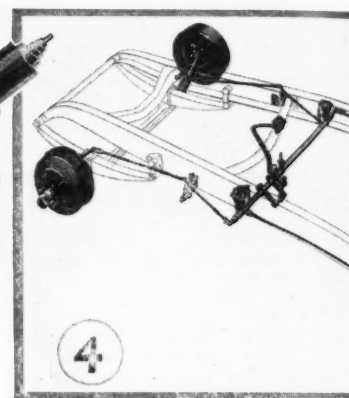
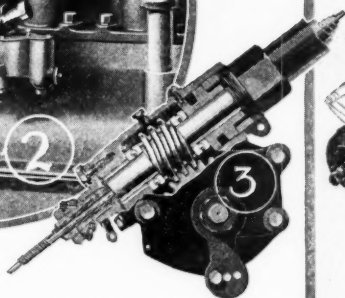
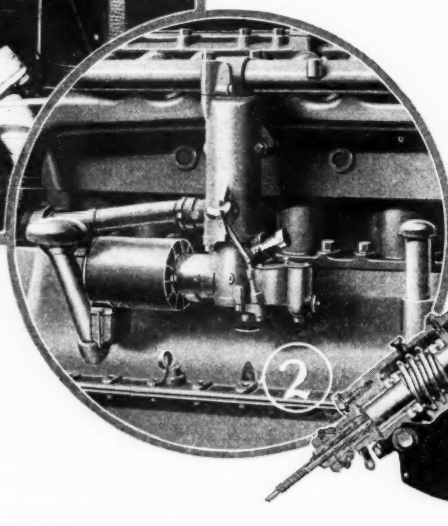
THE design of automobiles does not stand still. Neither can the successful service man. He must keep pace with the developments which are being incorporated in the design of motor cars.

Back in 1911 it was a much argued question as to whether the self starter was a practical thing. Every new development goes through this stage and must earn its spurs. When the electric starter proved essential it was up to some one to learn how to service it. Many mastered its intricacies, while others fell by the wayside.

A year or so ago, it was the question of four-wheel brakes and balloon tires which took the center of the floor at automobile shows and wherever cars were discussed. Now they, too, are taken as a matter of course. But in many cases the service angle of these new units has not been fully figured out. In the matter of balloon tires this is particularly true. No one wishes to give up the comfort that this tire makes possible and yet the problem of front wheel shimmy which is aggravated by the use of these tires is not entirely solved.

Improvements Here to Stay

Other features of motor car construction which have come to stay are the air cleaners, oil filters and distilling devices, as well as electric and hydrostatic gasoline gages; all having their rightful place and each requiring at times some special knowledge on the part of the service expert.



Four-Wheel Brakes.—The general principles of four-wheel brakes are not greatly different from those of two-wheel brakes except that a little more attention must be given on the mechanical type to the question of equalization. Cars of this type which frequently come to the service station should be studied so that knowledge rather than guesswork will be depended on.

Among the factors that determine the correctness of adjustment we have the freedom of operation of the various levers and rods, for a poorly lubricated part will throw out of balance the uniform distribution of the braking effect. Sufficient clearance between drum and lining during release is also essential, as well as proper pedal adjustment.

When we come to the hydraulic type of brake we find it is essential to know how to bleed the lines to remove air from the system. Briefly this is accomplished by opening the bleeder connection at each brake and expelling liquid and air until nothing but liquid comes out.

Aside from the question of being familiar with the mechanical details which have to do with four-wheel brake maintenance is the larger one of the merchandising angle. A shop soon becomes known for its ability or lack of ability to handle certain classes of work, and along with the ability to properly service brakes should come the job of relining them when they need it.

Balloon Tires.—Balloon tires in themselves do not present much of a problem to the service department, although the repair operations involve some special knowledge and some special equipment as compared with conventional cord tires. The balloon tires, however, bring with them a problem and a sales opportunity.

Servicing

Up-to-Date Service Men Care of the New Un Which, Although a Year or so Regular

By A. H.

Where the service salesman is really a salesman as well as a good trouble shooter, he can sell many a set of shock absorbers, for the balloon tire has put the shock absorber in the necessity class, if it was not already there. This means that a contract for the sale and distribution of a good shock absorber should be a good sales asset, which would go well with specialized service on four-wheel brakes.

The path of the balloon tire, however, is not beset with roses only. The thorns are also there, and in this case the thorn is the shimmy tendency. To the service man this means first that the sale of a new tire or even its application to the wheel should be accompanied by a check as to the balance of the wheel, particularly if the tire is mounted on a front wheel.

Wheel Balance Vital

Those who have visited the Indianapolis track before any of the recent great races have seen the drivers and mechanics attending to the many details that must be taken care of, and one of the points about which they are most particular is the balance of the wheels. Where wire wheels are used, the ever available wire solder is used, wrapped around the spokes until perfect balance is obtained.

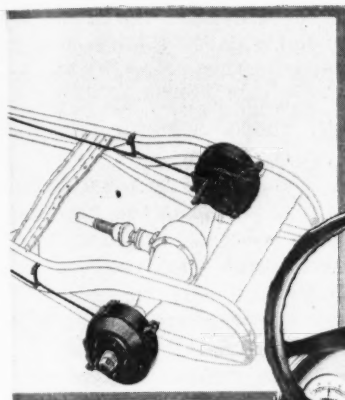
In commercial work or where other types of wheels are used it would be necessary to apply the necessary weight in some other form.

Steering Gear Service.—More attention to the steering gear and connections is

The 1926 Car

*Must Know How to Take
its of the Modern Car,
Experimental
Ago, Are Now
Equipment*

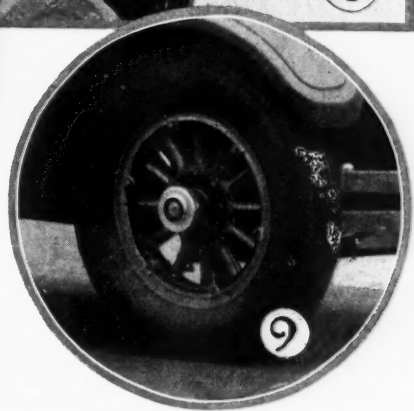
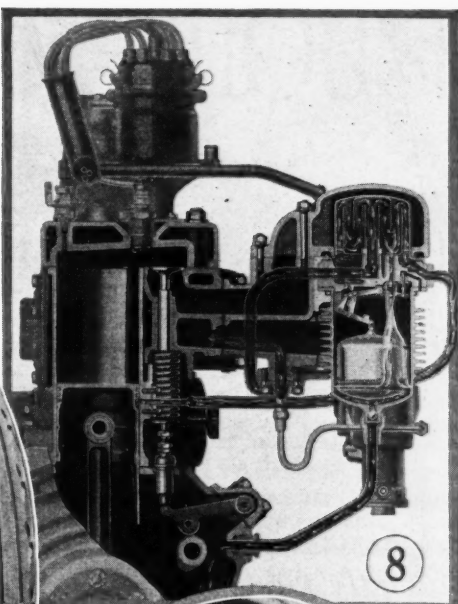
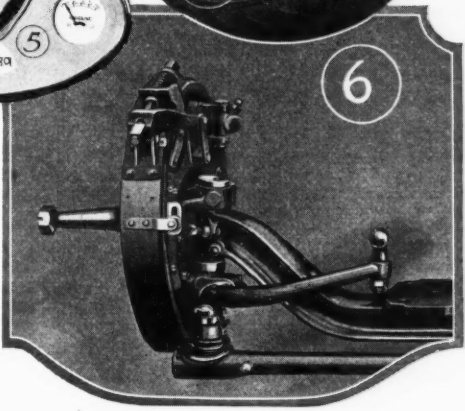
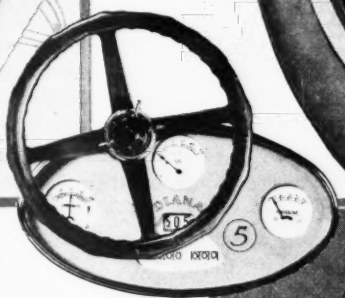
PACKER



necessary with the present cars than was ever before the case, for while the gears are better and connections better lubricated, we have the increased tendency for front wheel shimmy which makes it imperative to keep steering connections tight. Play in the gear itself or in the connections will cause trouble. Then again the correct toe-in for the front wheels must be maintained in order to have satisfactory steering, while in cases of bad steering it is frequently found that experimenting with the caster angle of the king pin will effect an improvement.

Air Cleaners.—Preventing dirt and grit getting into the engine is the function of the air cleaner which is now standard equipment on many cars and while these devices do not present much of a service problem, they do present a sales opportunity. To the wide-awake service salesman it is a chance to sell a cleaner to the owner of a car which is not so equipped.

Oil Cleaners.—The same sales argument that can be used in behalf of the air cleaner can be used for the oil cleaner which takes out impurities after they have entered the lubricant. There is also a service angle to the oil cleaner. Some of these are primarily filters which remove mechanical impurities, such as grit and dirt which enter through the breather pipe or come with the air drawn in at the carburetor. They also take out of the oil small particles of metal which gradually get into circulation as wear in the engine takes place.



5. The gasoline gage requires occasional attention if trouble due to poor connections is to be avoided.

6. The angle of the king pin with front wheel brakes is usually about 7 degrees off of the vertical. This angle should be known if the axle ever needs straightening.

7. Another place for lubrication, the universal connection which completes the mechanical linkage from the brake pedal to the brake shoe at the front wheel.

8. A system of getting the gasoline out of the oil after running with a cold engine or use of the choker has caused dilution.

9. The modern contribution to passenger comfort—the balloon tire. It needs just the right pressure if it is to serve well.

On the filter types, the service would consist essentially of a periodic replacement of the filter element, which is usually designed to be discarded in favor of a new one at intervals of from 10,000 to 15,000 miles.

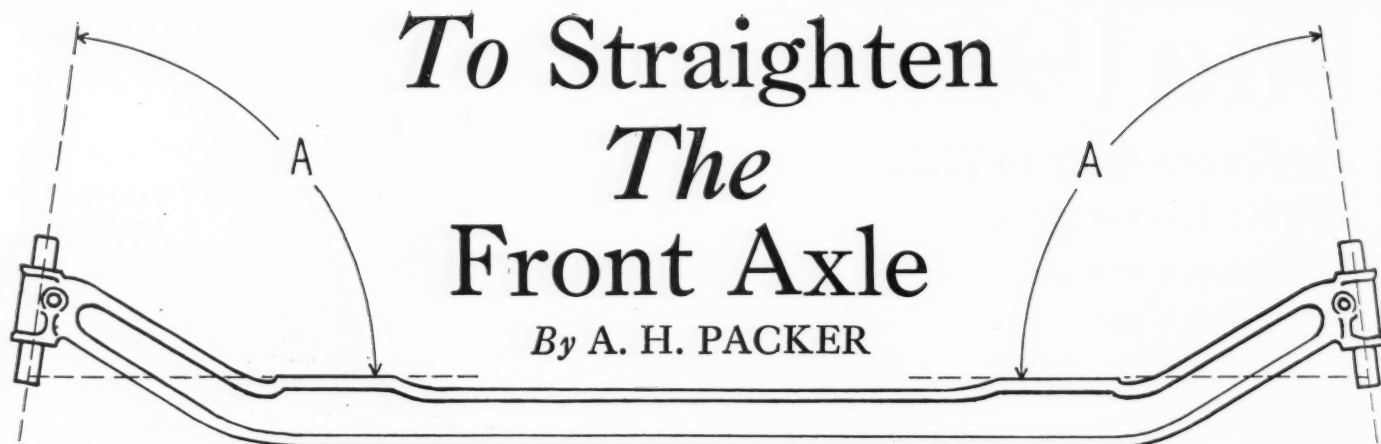
Exhaust Device Needs Overhauling

Exhaust heat is usually employed to give the temperature necessary for vaporization of the fuel and this means that at some time the device will need the carbon removed, for where exhaust gas goes, carbon goes.

Devices Used in the Fuel System.—The need of getting clean fuel to the carburetor is more and more realized and this has led to the use of filters in the gas line, usually between the main gas tank and the vacuum tank, or else between the gas tank and the carburetor. Occasionally these need new strainers or chamois installed, or perhaps only draining, but there is work to be done, in any event.

On some cars gasoline gages are being used which depend for their operation on a column of air which operates on a column of liquid in the gage and is controlled by the amount of fuel in the tank. Leakage in the small tube connection renders such a gage inoperative or inaccurate, so that the inspection of the connections of such a gage might well be made part of a thorough inspection job.

Another gage used on one of the high priced cars is operated electrically and failing to function would require the services of an electrical trouble shooter,



Front axle showing king pin angle referred to in accompanying table

A Service Job That the Shop Is Frequently Called Upon to Perform and One That May Be Successfully Done if the Proper Equipment and Right Information Are Available

IN the overhaul of the wreck job, one of the details that must often be taken care of is the straightening of the front axle I-beam, and unless the distortion has been very bad, this can be successfully accomplished. Automobile manufacturers and experts on alloy steels usually recommend doing the job cold if possible, as the application of heat will render uncertain the strength of the material, which has been produced by the right heat treatment during the manufacture of the axle.

Mechanics frequently refer to jobs successfully done with the application of heat and testify to the fact that

no trouble has resulted later, but this is doubtless due to the fact that there is built into the axle a large factor of safety, so that the I-beam stands up even if somewhat weakened. The best shops, however, will be found equipped with a heavy press of some sort.

In straightening the axle it is desirable to insert king pins and sight along the I-beam to see that the pins are parallel. It is also necessary to see that the king pins set at the proper angle as seen from the front of the car. Before four-wheel brakes came into general use, most king pins were vertical and the spindle slanted down so as to give the wheel the necessary camber and make the contact of tire and road come approximately under the pin.

With four-wheel brakes, however, this condition has been changed on many cars and the wheel is approximately vertical while the pin slants at such an angle, that if extended it would strike the road at about the center of tire and road contact.

CAR	MODEL OR YEAR	ANGLE "A"	CAR	MODEL OR YEAR	ANGLE "A"
Ajax	1925-26	90	Jordan	Mod. B, C, F, M, H and MX	90
Buick	Before 1924	90	Jordan	Mod. L, K, J and A-Timken	84
Buick	1924-25-26	82½	Jordan	A-Eaton	82½
Cadillac	1915 to Mod. 61 of 1923	90	Locomobile	Mod. 48	82½
Cadillac	V-63 and 314	85	Locomobile	Mod. 90 and Jr. 8	83
Case	K-10, L-11, M-12, N-13, O-13-14, R-14, S-14, T-16, U-18, V-20, W, X	90	Marmon	2 wheel brakes	90
Case	J. I. C. and Y.	83	Moon	4 wheel brakes	83
Chandler	All	90	Nash	All	90
Chevrolet	1916 to 26	90	Oakland	Mod. 6-54 A, 6-54 B and Series Six	Pin Slants ¾ in.
Chrysler	58	90	Oldsmobile	All	90
Chrysler	70	80	Overland	All	90
Chrysler	80	84	Packard Six	Mod. 126-133	90
Cleveland	40, 41, 42, 31	90	Packard Six	Mod. 236-233	82½
Cleveland	43	85	Packard Six	Mod. 326-333	81½
Cunningham	1921 to 24	90	Packard Six	Mod. 136-133	82½
Cunningham	1925 and 26	84	Packard Eight	Mod. 236-243	81½
Diana	All	83	Packard Eight	Mod. 236-243	81½
Dodge	All	90	Paige	1920 to 25 2 wheel brakes	90
Duesenberg	1922 to 1926	90	Paige	1926 4 wheel brakes	84
Durant	1921 to 1926	90	Peerless	Mod. 80	83
Elcar	Mod. 6-60, 1922, 1923 and 1924	90	Peerless	Mod. 69	82½
Elcar	Mod. 4-40, 42, 55 of 1923, 24, 25, 26	90	Peerless	Mod. 72	82½
Elcar	Mod. 6-50 of 1923, 24, 25	90	Peerless	Mod. 67	84
Elcar	Mod. 6-65 of 1925, 26	84	Pierce Arrow	All	90
Elcar	Mod. 8-80 of 1924, 25	84	Reo	All	90
Elcar	Mod. 8-81 of 1926	83	Rickenbacker	All 4 wheel brake cars	83
Essex	All	90	Rolls Royce	All	85
Flint	B-40, 1925	83	Star	1921 to 1926	90
Flint	B-60, 1926	83	Stearns Knight	2 wheel brakes	90
Flint	E-80, 1926	81½	Stearns Knight	4 wheel brakes	82½
Flint	Z-18, 1926	90	Studebaker	16 to 24	90
Ford	All	90	Studebaker	2 wheel brakes	90
Franklin	All	90	Studebaker	Big Six 4 wheel brakes	85¼
Gardner	1920 to 24	90	Studebaker	Special Six 4 wheel brakes	85¼
Gardner	1925-26	83	Studebaker	Standard Six 4 wheel brakes	85½
Gray	All	90	Stutz	AA, 8 cyl.	84
Hudson	1915 to 1926	90	Stutz	Previous to Mod. AA	90
Hupmobile	4 cyl. 1917 to 1925	90	Vellie	2 wheel brakes	90
Hupmobile	6 cyl. 1925-26	85	Vellie	4 wheel brakes	83
Hupmobile	8 cyl. 1925-26	83½	Wills Ste. Claire	Cars without hyd. brakes	90
Jewett	1922-25 2 wheel brakes	90	Wills Ste. Claire	Cars with hyd. brakes and Eaton axle	82½
Jewett	1925-26 4 wheel brakes	84	Wills Ste. Claire	Cars with hyd. brakes and Timken axle	84
Jewett	1926 Mod. 6-40	83	Willys Knight	1922 to 1926	82

The READERS' CLEARING HOUSE

Questions And
Answers



On Dealers
Problems

Method to Use Burning in Ford Bearings

Q.—Would like to have a little information on burning in Ford bearings. Would also like to know whether burning in is better than scraping.—Walter Passehl, Box 111, Suring, Wis.

The burning in process gives better results than scraping if properly done. Before the burning process is started the bearing should be given a rough preliminary fit in the upper half of the case. The burning should not be started until it is seen that the crankshaft bears on each of the three main bearings, which can be determined by looking at the impression left by the Prussian blue or lamp black. Assuming that the upper halves of the main bearings are in alignment the next step is to file the edges of the babbitt with a flat rasp or file to an angle of about 45 deg. from the horizontal.

The groove thus formed, when the cap is assembled, acts as an oil lead for the bearings and also as a clearance to take care of the babbitt pressed out during the subsequent burning-in. The crankshaft is now fitted to the case. The crankshaft end play is determined by the variation between the length of the rear bearing and should not be more than .004 of an inch. Note the expansion in length of crankshaft due to heat in operating engine, is forward from the rear or long bearing. Any rearward movement would affect the gap between coils and magnets. The center and front bearing should have from 1/32 to 1/16 of an inch end clearance to allow for expansion and lubrication. The oil grooves of the caps are filed and the caps are placed over the shaft using the marks which were previously punched or stenciled on them to determine their correct location.

Two or More Shims

The cap is now rocked over the shaft and about two shims of .002 in. thickness are applied until the rock of the cap shows a .004 in. or .005 in. clearance between case and cap edges. The caps are then bolted down and the bearings are run in at a speed of about 200 r.p.m. for a period of 1 min. The bearings during this process are pressed to conform to the shaft and at the end of one minute's run each of the main bearings should be smoking hot and of such temperature that the hand cannot be placed on them without burning.

If all caps show about the same amount of heating the caps are removed and examined to see whether the bear-

ing surface covers over 75 per cent of the total area of the bearing cap.

If some of the bearings are not making the required amount of surface contact, the operation should be repeated. Providing all bearings have the proper amount of contact surface, it is advisable to give them a running in of about 20 min., using about the same tension as is used in the burning-in process. Oil is placed on the crankshaft and on the bearing halves before the running-in process.

The same method is used in burning in connecting rods, the cap being fitted so that it touches at one side and lacks about .004 in. of touching at the other. After the bearings have been burnt in, they should be run in with oil.

Pounding in This Case Due to Wrong Timing

Q.—We have a truck that pounds a good deal. It had a thin gasket between the cylinder and crankcase so changed it to gasket 3/8 in. thick to see if the pounding would stop, but it did not help any. State correct thickness of gasket.

A gasket 1/16 in. thick should be used. Would advise your checking the magneto timing. The interrupter points should just begin to open with the spark lever in the advance position when you reach the point 3 1/2 in. before top dead center as measured on the flywheel.

This is according to official timing instructions. If timed in this way it will be found that the spark in retard occurs about at top dead center.

The Readers' Clearing House Index

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READERS' CLEARING HOUSE Planning Your New Building

All Available Space Is Used Here

Q.—We have a lot 64 by 132 ft. on which we are contemplating building a garage and will appreciate your suggestions. We have both Buick and Chevrolet contracts, 56 cars on Buick and 150 on Chevrolet. We would like to have salesroom large enough for five cars of each make. You will find attached a sketch of the lot showing the streets and alley.—The Mueller Imp. & Auto Co., Delphos, Ohio.

An Unusual Request

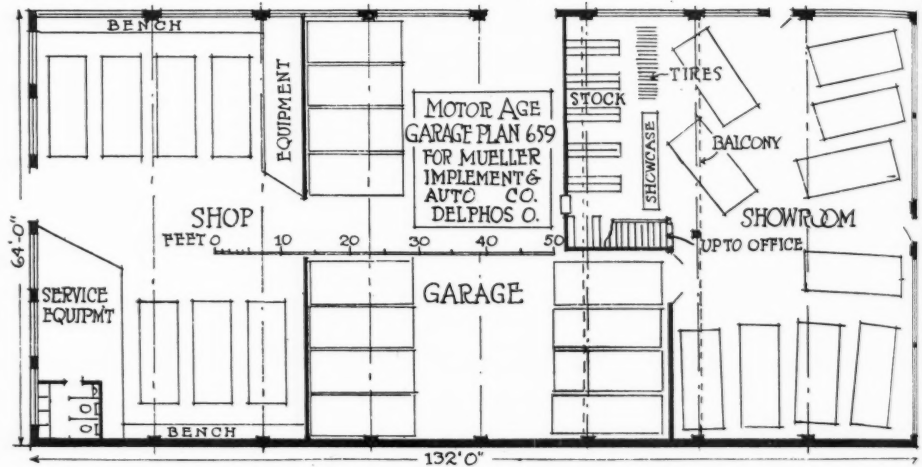
Your request for a showroom to hold ten cars is quite unusual in a building the size yours will be. In order to avoid cutting down the shop and garage departments, we have suggested installing your office and possibly part of your stock on a balcony at the rear of the showroom. The accessory and parts department occupies the position under this balcony and there is space as well for storage of four cars. We have not made a plan of this balcony, but it will be very easy to arrange for there is plenty of space for sales office, salesmen, general office and office toilet rooms.

Counting from the front of the building the balcony will be between the sec-

ond and third trusses and the first, second and third trusses will all be elevated five feet higher than the balance of the roof supports. This is necessary in order to give head room on the balcony and also gives a better and more roomy and airy appearance to the showroom. The

By Tom Wilder

shop is entered through the garage and cars may leave the shop by way of the alley.



Part of the space under the balcony is used for storage but this space could be added to the showroom instead if that is more important.

Poor Brush Contact May Be Responsible

Q.—On a Franklin car, model 9B when you first start up and are in low speed the indicator shows charge and when the car is speeded up it shows discharge. The battery is in right and the starter will crank the engine and the wiring has not been touched.—D. C. Slick, East Granite City Garage, 2625 Lincoln St., Granite City, Ill.

We would recommend inspecting the brushes. If the commutator is badly worn or if the mica is high, or if the brushes are worn down or if the brush spring tension is not what it should be the operation may be fair at low speed and poor brush contact may make the machine quit at medium and high speed. Operation as a generator depends on the third brush making good contact.

If this brush should fail to make a good contact as the speed increases, you would still have the armature connected through the indicator to the battery so that it would draw current, for with no field circuit there would be practically no voltage generated. You might try connecting an ammeter in the shunt field circuit, either between the switch and the fuse or between the fuse and the field terminal on the motor generator. This would enable you to see whether the shunt field current is steady or not and would tell you whether there is a brush making poor contact.

LEGAL QUESTIONS ANSWERED

By Wellington Gustin

NEW JERSEY LIEN LAW

Q.—Sometime in February we collected a judgment that we sued on a personal note that was given for a new car. The party owes us some money for tires, tubes and cash that we loaned to renew the note once when it was due. We towed the car in for the above bill under the Garage Man's Law and we were told by the other party's lawyer that we had no legal right to do so after they have settled the judgment on the note.—Lakewood Nash Sales Co., Lakewood, N. J.

Your state, New Jersey, by statute gives you a lien for repairs, storage, supplies and accessories furnished at the request or with the consent of the owner of an automobile, or his representative, and empowers you, without process of law, to detain the car for which supplies, etc., are furnished, at any time it is lawfully in your possession until your charges are paid. But your lien is not superior to that of a prior conditional sales contract or a prior chattel mortgage properly recorded.

This law is found in the first section of Chapter 33, page 96 of the Laws of New Jersey 1925, being an amendment to the law of 1915. Section two of the law gives you the right to seize the car for your charges without process of law but only after demand of payment of claim, either personally or by registered mail, if owner's address is known.

Your right to take and hold the car against the owner seems clear enough under the statute. Perhaps this owner contends that your charges were paid, included in this judgment. If so, that is a question of fact whether you were paid in full.

MONTANA LIEN LAW

Q.—Please advise regarding Montana lien law.—Reader.

Montana gives the repairman for repairs, storage, or services in keeping, protection, hauling, etc., a lien for his reasonable compensation. This lien is dependent upon the repairman retaining possession of the property affected. This lien does not take precedence over the lien of a prior chattel mortgage or other recorded lien on the property involved, unless within 10 days from the time of receiving the property, the repairman shall give notice in writing to the mortgage holder or other lien holder, stating his intention to assert a lien on said property, under the terms of the statute, and stating the nature and approximate amount of the work performed or furnished or intended to be performed or furnished. By following this method the repairman may force the prior lien holder to pay the repairman's claim within 10 days or lose his priority.

Answers to Readers' Questions

Uniformity Needed for Smooth Operation

Q.—Is there any device on the market that will successfully dampen the vibration on a 1925 Dodge Brothers car? We have tried a brace which, although working successfully on other cars, does not seem to do much good on the Dodge.—B. C. Subscriber.

We do not believe you will have any trouble if you will check up on the following items: Uniform weight of pistons, light weight pistons, uniform weight of connecting rods, uniform compression in all cylinders, uniform valve timing in all cylinders and uniform timing of the ignition in all cylinders.

Packard Single Six Carburetor and Fuelizer

Q.—Would like to have you illustrate and describe the adjustments of the Packard carburetor as used on the present model single six, also showing the operation of the fuelizer. We have trouble in getting these cars to idle properly, although they are satisfactory in other ways.

The fuelizer burns a portion of the fuel in a separate combustion chamber and feeds hot gas into the intake manifold through a screen. This assists in vaporization. The color and condition of the flame is the index to the proper operation of the fuelizer. It should be observed with motor idling. A steady bluish green flame indicates a good mixture. Adjustment of the mixture going to the fuelizer can be made by admitting either more or less air to the burning chamber by means of a small needle valve at the top. If operation is still unsatisfactory, remove the plug above the inspection glass, the glass and screen retainer which is held by a set screw at the rear; clean the screen and glass and also the spark plugs and replace parts exactly as they were.

Auxiliary Air Valve Adjustment.

Permanent adjustment of the auxiliary air valve is made by changing the tension of the air valve springs. These springs which control the action of the valve are, in addition, adjusted for temporarily varying operating conditions by means of a cam operated by the carburetor control on the instrument board. The proper adjustment for normal running conditions is obtained when the carburetor control is against the instrument board. To enrich the mixture, pull the control out as required.

The auxiliary air valve itself should be adjusted to the leanest possible mixture at which the motor will idle properly when hot. The dash adjustment should be pushed all the way in and the valve, when depressed to the point where it touches the inside spring, should have a drop of $\frac{1}{2}$ in. from its seat.

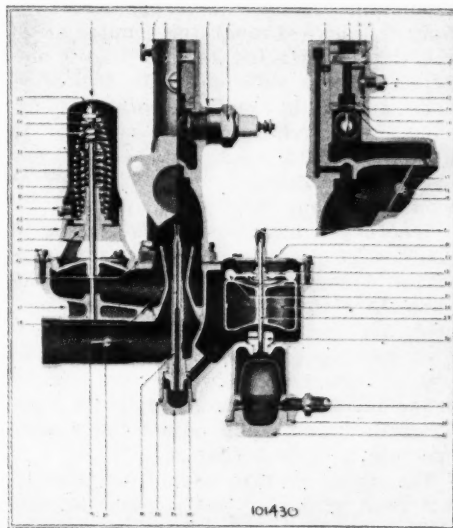
To check, proceed as follows: Push

the carburetor control all the way in. Measure height of top of air valve stem from some fixed point on the motor. Depress air valve until it strikes inside spring. Measure height of top of stem as before. The difference in these two measurements is the air valve drop.

The outer spring should be adjusted so that the valve just touches its seat when the carburetor control is against the dash. Then with the motor warm reduce the compression of this spring as much as possible, retaining smooth motor operation.

Make sure that air adjusting connecting rod clevis is so adjusted that the air shutter completely closes when the carburetor control on the instrument board is pulled all the way out.

Suction Tube.—A suction tube leads from the base of the spray mixing tube around the carburetor into the intake manifold. The function of this tube is to prevent loading of the motor when it is idled or driven by the car in coasting with the clutch engaged. This is accomplished by the tube collecting the gasoline which collects in the carburetor body due to condensation. It also prevents loading under continued low throttle driving and aids in giving immediate response in acceleration. Failure of the suction tube to function properly is evidenced usually by gasoline dripping from the carburetor and by loading of the motor as described. The cause of failure would be air leakage into the tube or connections, or, more frequently, clogging of the passageway either in the tube elbow, or carburetor body. The best way to clean this passage way is to remove the tube and blow it out, together with the lower elbow connection and the drilled leads in the carburetor, with compressed air.



Fuelizer on Packard six

Clutch Throwout Bearing Squeal Remedied

Q.—Do you know of any way to permanently stop the squeal caused by the clutch throwout bearing or plate of a Chevrolet model K, that has been glazed by riding the clutch? In bad cases I have tried tearing down the clutch and taking this disc out and treating it by sandpapering and then applying graphite grease. But this remedy is not very effectual.—Egbert's Garage, Henderson, Colo.

If you will take this composition bearing or plate and with a hack saw put a number of radial cuts in it we believe you will overcome this trouble. The hack saw cuts need only be $\frac{1}{2}$ in. deep, just enough to break the surface. This allows graphite to work out and provide lubrication and eliminates the musical tendency of this bearing.

INSTALL ONE WITH A RECORD OF PERFORMANCE AND ECONOMY

Q.—What kind of a carburetor and what model should be used on a 1917 model, 6 cyl. Chandler? Also advise what make and model carburetor should be used on a 1917 Haynes.—Robert W. Porterfield, Cor. N. W. 5th & School St., Richmond, Ind.

We do not believe it makes very much difference what make of carburetor you use, but it is essential to use a modern up-to-date carburetor which is designed for present day fuel. The carburetors we had nine years ago were all right for the fuel which we obtained at that time. Today modern carburetor equipment is needed and a hot spot manifold should preferably be installed.

REDUCING THE COMPRESSION STOPS THE KNOCK

In the March 25, 1926, issue of MOTOR AGE I notice a subscriber, J. C. Lewis of Dilworth, Okla., is troubled with Overland four-cylinder cars with a peculiar knock. The knock he has reference to is caused by the compression chamber being too small. I have had several of these act exactly as described and have completely overcome the trouble by cleaning out the carbon and putting on an extra cylinder head gasket, which makes two cylinder head gaskets used at the same time. It is then necessary to set the carburetor and the spark timing for this reduced compression.

On four cylinder Buicks I have had good results by setting valves at .008 in. and then adjusting carburetor. I would then try the car on a fairly good grade adjusting the timing until it would spark knock with lever fully advanced at about the time you would have to shift gears. I would then set the breaker points at .013 or .014 and keep changing the timing and carburetor until good results were obtained.—New York Subscriber.

Clearing Up Electrical Troubles

The Other Transformer Is An Inductance

Q.—Can you supply wiring diagram of ten battery Tungar charger? Could you explain the purpose of a small transformer above the large one?—Jules L. Sottiaux, Chenoa Battery Service, Chenoa, Ill.

We are showing a diagram which gives the general idea of the rectifier circuit. In this diagram an auto transformer is used, but in some of the rectifiers the transformer has two entirely separate windings, one connected to the A. C. line and one supplying the charging current. In the diagram we show the regulator is connected in on the autotransformer. We understand some rectifiers are made where the regulator is connected in on the reactor so that it throws more or less turns of the reactor into the direct current charging circuit. We believe that in the rectifier you have the unit which you call a small transformer is really a single winding on an iron frame which acts like a resistance to regulate the charging current to the proper value. Being wound on the iron frame it is more effectual than a resistance due to the fact that the current is pulsating. When you operate the handle on the rectifier switch panel you are connecting more or less turns of this reactor in the battery circuit.

The connection of a rectifier is very simple. The two wires at the top of the rectifier are connected to the alternating current line. The bulb is put in place and the wire with a spring clip on it is connected to the wire at the top of the bulb. The dial switch handle should then be moved to the left or counter clockwise as far as it will go. The two wires which come from the bottom of the rectifier are plus and minus and go to the plus and minus ends of the battery or string of batteries being charged.

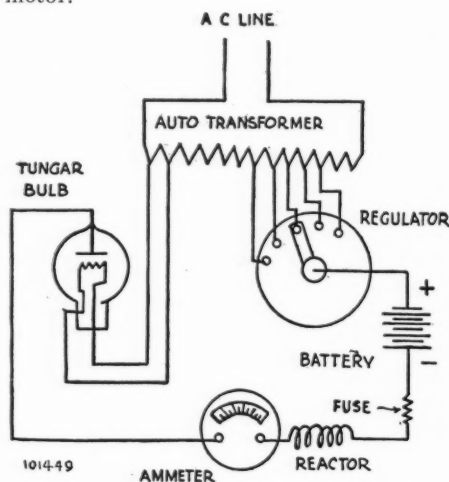
Speed for Buffing Wheel

Q.—What is the best speed for a four inch buffing wheel or wire brush? Would a common quarter inch electric drill be powerful enough to run this size brush for buffing tires?

We do not know if there is one speed that is absolutely the best to use. However, some of the buffing outfits on the market run at 1725 R.P.M. This is the normal speed of the small motors usually encountered. Some buffing outfit motors are one quarter horse power and some are one half horse power. With the one half horse power you can do fast work and can press the tire pretty hard against the buffing wheel. With the quarter horse power motor you have to go a little slower and be careful not to

Edited By A. H. Packer

overload the motor or stop it entirely. We believe that the ordinary quarter inch electric drill has a motor which may be even a little lower in horse power. It would accordingly be somewhat questionable as to whether this could be used with complete satisfaction. It would depend somewhat on how much work you had to do. If you only had an occasional small job you might get away with it using the electric drill motor.



Circuits of one type of Tungar rectifier

Usage of Car Determines Correct Charging Rate

Q.—What is the correct generator charging rate of a 1926 Ford, also a 1924 Chevrolet coupe.—Sherman H. Purnell, Blaindsville, Ill.

On either car the charging rate can be set in accordance with the way the car is driven. If the car is operated over long distances through the country all of the time a charging rate of 7 to 8 amperes will be sufficient. On the other hand during the winter months and for short runs a charging rate of 14 or 15 amperes would work out better. For average conditions 10 to 12 amperes would be about right on either car.

Where you have customers coming to you for electrical work it is advisable to tell them to drop in frequently and have the battery tested. If you continually find the battery is up to 1280 or 1300 specific gravity, then it would be well to adjust the charging rate a little lower and if the battery constantly runs down then you could adjust the charging rate a little higher.

The charging rate should be slightly increased when electrical accessories are sold and installed, so that the current used from the battery will be replaced.

Fuse No Protection to Lamp Bulbs

Q.—In the Nov. 27, 1924, issue of Motor Age on page 28 I find it tells a great deal about lamp bulbs burning out. I want to know if a short circuit or a ground will cause the bulbs to burn out, supposing, of course, that the engine is running and the generator is charging the battery, and that the entire system is in first class condition, except for the short circuit or ground. If a short circuit or ground will cause the bulbs to burn out where will it have to occur and why will it cause them to burn out?—Carlos Farris, Tilford, Ky.

A short circuit or ground will not cause the bulbs to burn out. The only thing that makes more current go through the bulbs than they should have is high voltage, but a short circuit or ground pulls a heavy current and pulls down the voltage. You can make a simple test to prove this by running any car, a Ford for example, and while it is running and the generator is charging the battery take a piece of wire and make a temporary connection from the back of one of the lamp plugs to the frame of the car. Just flash this connection to ground and every time you do you will find that the lamps get dim. This shows there is less voltage and less current going through the lamps. If you make the connection for a long time you may burn out a wire or you may burn out the ammeter or switch, but you will do no harm to the lamp bulbs.

He Is Wrong

Q.—I was told the other day by a man who is supposed to be an expert automobile electrician that fuses are used to protect the bulbs. Is he wrong?

The expert electrician may be fast at removing starters, turning commutators and replacing brushes, but in this case we feel he is mistaken. The fuses are designed to protect the wiring and not the bulbs. You can prove this also if you want to. You can put a fuse in series with a wire to one of the headlamps and then run the engine. If you disconnect the battery while the engine is running at a fairly good rate of speed you will find that the lamp burns out and that the fuse does not blow and does not protect the lamp. This would be an expensive experiment unless you wanted to try it on the taillamp circuit only with the other two plugs out of the socket. In this case it would cost about 25 cents to prove that the fuse does not protect the lamp bulbs.

The only device that gives lamp protection when the circuit from battery to generator is broken is the voltage regulator. This has been abandoned on most passenger cars in favor of the third brush generator.

EDITORIAL

Service Is the Motto

TO THE more than 1,000 automotive merchants who become regular subscribers to MOTOR AGE service beginning with this Annual Sales and Service Reference Number, service is our motto.

The more than 20,000 other dealers who have been regular readers know the type of service rendered by this publication. Our new friends, we believe, receive a good sample of it in the suggestions, ideas, data and methods offered between the covers of this single issue.

The publishers of this paper employ to the best of our knowledge a larger staff of editorial correspondents than any weekly business or trade publication. It is one of the reasons why MOTOR AGE has the largest following of any weekly and brings you the news of *your* business when it is *real* news.

Just as you use MOTOR AGE as a channel for authentic information about your business, so do the Industry's leading manufacturers use it as their means for telling the trade about their products. Money saving devices, time saving shop equipment, quick selling accessories and necessary parts, equipment, etc., are described and illustrated in their advertising messages.

Make it a point to invest a little of your time each week with MOTOR AGE and before long you will understand why so many progressive dealers consider it their silent partner.

A Good Word for Installment Sales

JUSTIFICATION for the installment method of buying and selling merchandise, so highly developed in the automotive industry, is made by a special committee of the American Bankers' Association. The bankers, who are vitally interested in this matter because they loan funds to the time payment finance companies, agree that this is a safe and sound method of merchandising. They are careful, however, to point out the safeguards that must be set up to protect business when it is operated on the time payment plan. The matter of greatest importance is obtaining at the time of sale a sufficient down payment to give the purchase a substantial equity in the merchandise and then the completion of the extended payments within a period that would not permit of too great a depreciation of the merchandise. On another page in this issue the experience of the automotive industry with extended payments is graphically portrayed.

In automotive merchandising all things come to him who goes out after the business rather than "to him who waits."

Time to Work

THERE are some merchants who take business as it comes. The year round they keep store and cater to the wants of those who seek them out and buy their merchandise. But as a general thing such merchants are not prosperous. They may get by for a time, depending upon their competition and location, but they will never progress. The highly successful merchants are the ones who go after business.

Sometimes we see a highly successful merchant who is resting on his laurels. He has fought a good fight and put his business on a profitable basis and now for some time he had been more or less playing. At the same time his business may have reached a standstill or actually have started downhill. He may not know it. Some day he will wake up with a shock.

A successful business requires the constant management of an energetic proprietor. When the business fails

to progress as it should, then it is time to work harder. And if it should happen, as it sometimes does, the general business conditions "tighten up" so that the people are not buying as freely as they once did, then it is time for all good merchants to forget their play for awhile and get down to work.

The dealer who eventually makes a profit on his used car transactions is the one who has a policy of insisting on used car profits.

Out With Grade Crossings

A MATTER of highest importance in making highway transportation safe and economical is the elimination of railway grade crossings. The toll of lives lost at these crossings annually is appalling, but there is also a great economic loss resulting from the traffic jam and delays these crossings occasion in and near large cities. It is not at all unusual on Sundays and holidays to see long double lines of traffic extending hundreds of yards waiting for mile-long and slow moving freight trains to pass. The separation of grades is essential, and in the long run economical.

The quality of a prospect list depends on the work and analysis going into its preparation. Better preparation—better prospects—more sales.

We Must Have Wider Roads

THE building of 16- and 18-foot paved highways in this country near cities should be abandoned at once. The time has come when roads so narrow are entirely inadequate and are bound to cause dangerous and costly traffic congestion. Highway engineers and authorities have been a long time learning how to cope with modern automotive transportation requirements, but indications are that in many sections of the country they are attacking the problem scientifically and planning to build roads wide enough to carry the traffic. Instances of progress in this respect are told on other pages in this issue.

PRODUCTION STILL AT HIGH RATE

Entries Close for Speed Classic With 37 Listed

Five Foreign Cars, Three French and Two English, Will Compete May 31

INDIANAPOLIS, May 3.—With 37 cars listed, five of them from foreign shores, entries for the Fourteenth International 500-mile race to be held at the Indianapolis Motor Speedway, Monday, May 31, for a purse approximating \$100,000, closed at midnight Saturday.

It is the largest group of cars nominated to face the starter in the great gasoline classic in recent years and it was announced at the speedway office that several other proposed entrants were eligible if the entries were in any post office bearing a government time stamp before the closing hour.

The 500-mile record for the Indianapolis track is 101.13 miles an hour, made last year by the winner, Pete De Paolo, nephew of Ralph DePalma, who has entered two different make cars this year in a strategic attempt to corral the greatest victory in automobile racing again this year.

Three French cars with two English cars have been entered and the three cars to wear the tri-color of France are now being shipped. It was definitely said at the speedway office that the Paris office of the local speedway was sure one more French car would be entered.

Only 33 cars are permitted to face the barrier for the long run over the two and one-half mile brick and concrete Indianapolis track, the cars to start being decided the week before the race with speed trials, the fastest cars taking the leading positions.

W. Douglas Hawkes, an Englishman, is the only foreign driver entered who has already driven at Indianapolis, but in the three car French team, the drivers of which have not yet been named, there are bound to be names familiar to American speed fans and drivers familiar with the Indianapolis bricks.

Following are the entries in order of cars, drivers and entrants respectively:

Duesenberg Special, Not Named, Peter DePaolo; Miller Special, Peter DePaolo, Peter DePaolo; Miller Special, front drive, Dave Lewis, Harry Miller; Miller Special, Harry Hartz, Harry Hartz; Miller Special, Fred Comer, Harry Hartz; Miller Special, Not Named, Harry Hartz, Miller Special, Bennie Hill, Harry Miller; Miller Special, Jules Ellinboe, Harry Miller; Unnamed, Ralph DePalma, Ralph DePalma; Unnamed, Not Named, Ralph DePalma; Miller Special, Peter Kreis, Pete Kreis; Miller Special, Frank Elliott, Frank Elliott; Unnamed, Cliff Durant, Cliff Durant; Unnamed, Harlan Fenger, Cliff Durant; Miller Special, front drive, Earl Cooper, Earl Cooper; Unnamed, Herbert Jones, Herbert Jones; *Schmidt Special, Not Named, Albert Schmidt; *Schmidt Special, Not Named, Albert Schmidt; *Schmidt Special, Not Named, Albert Schmidt; *Eldridge Special, E. A. D. Eldridge, E. A. D. Eldridge; *Eldridge Special, W. Douglas Hawkes, E. A. D. Eldridge; Hamlin Special, front drive, Not Named, Hamlin Motor Company; Duesenberg Special, Jack Foley, Jack LeCain; Duesenberg Special, Ben Jones, Ben Jones; Slever, Jr., Special, T. W. Pickard, T. W. Pickard; Miller Special, Norman Batten, Norman Batten; Abell Special, Thane Houser, Geo. Abell; Miller Special, R. G. McDougall, R. G. McDougall; Unnamed Car, Earl DeVore, F. P. Cramer; Boyle Valve Special, Cliff Woodbury, Cliff Woodbury; Green Super-Ford Special, Not Named, Green Engineering Co.; Miller Special, Dr. E. W. Shattuc, Dr. E. W. Shattuc; Miller Special, Daniel J. O'Brine, Daniel J. O'Brine; K & M Special, A. D. Cain, K. & M Machine Co.; Shambaugh Special, Chas. Shambaugh, Chas. Shambaugh; Duesenberg Special, Bob McDonough, Tommy Milton; Duesenberg Special, Ralph Mulford, Ralph Mulford. *French. †English.

Star Six Prices Up

PHILADELPHIA, May 1.—Durant Motor Company of New Jersey announces that the price of the Star Six touring car has been increased \$30. This model which formerly sold at \$695.00 now lists at \$725.00.

Buys Vim Assets

PHILADELPHIA, May 1.—The Levene Motor Co. of Philadelphia announces that it has taken over the entire assets of the Vim Motor Truck Co. and that it is prepared to provide complete service and parts on all models of Vim trucks.

Adds Moon and Diana

INDIANAPOLIS, May 1.—The Murphy-Rickenbacker Company, organized here a few months ago to take over the distribution of Rickenbacker in this territory, this week announced they have taken over the distribution of Moon and Diana for Indiana, and that the business will be conducted at their general headquarters at 436 North Capitol avenue.

Chrysler Adds New Six in Five Styles of Body

DETROIT, May 4.—A new 6-cylinder car in five body types has been added to the Chrysler line. This new car, having practically the same overall dimensions as the present Chrysler four-cylinder model, is equipped with an engine of 3 in. bore and 4½ in. stroke, developing 54 horse power. The body types and prices are: touring \$1075, roadster \$1145, coupe \$1165, coach \$1195, sedan \$1295. The chassis price is \$915. Four-wheel hydraulic brakes are standard equipment. Tires are 30x5.25 balloon. Headlamps are of the bullet type.

Howard R. Bucher Dies

WILLIAMSPORT, Pa., May 1.—Howard R. Bucher, traffic manager of the Lycoming Manufacturing Company, builders of Lycoming motors, died in the Williamsport hospital following an appendicitis operation. Mr. Bucher, who had been a lifelong resident of this city, going to the schools here, worked for some time for the Pennsylvania Railroad Company. Ten years ago he secured a position with the Lycoming Manufacturing Company, where he was traffic manager at the time of his death.

Output Expected to Be Steady Throughout May

Most Companies Continue on Schedules Slightly Ahead Of Last Year

DETROIT, May 1.—Production activity in most of the larger companies continued through the week with indications that operations would be continued on much this basis through May. Some plants, notably Ford, are operating on a considerably curtailed schedule, output ranging considerably less than the weekly retail sales rate of approximately 25,000 to 30,000. This is against a rate of approximately 8000 daily at this time last year.

New production and sales records are continuing to be set by several companies. Most other companies are maintaining schedules which equal or slightly exceed those of the same period last year. Hudson-Essex operations are reduced primarily because of the building-up of stocks of parts against the spring buying movement. Manufacturing changes at Chrysler have reduced the output rate temporarily.

Better weather in the latter part of the month improved retail conditions in many parts of the country, according to factory executives, but the buying movement continues to be generally retarded. There is an improved feeling among the retail trade, executives report, which with good weather in May should bring deliveries to high points. By the month end stocks of cars in dealer hands should be practically cleared away, sales officials assert, leaving the way clear for heavy factory operations.

Uses Larger Engine

ST. LOUIS, May 5.—The Gardner Motor Company, Inc., has announced that all models on the 8-cylinder chassis are now being equipped with Lycoming 4HM engines. This engine is similar to the Lycoming 2H formerly used except that the bore is ½ in. larger, now being 3¼ ins. The new engine was first used on the 7-passenger, 135 in. wheelbase Sedan which was announced early in March.

Branstetter Moves

CHICAGO, May 1.—Harry P. Branstetter, Inc., Chicago, Kissel distributor for northern Illinois, has moved his headquarters from 26th and Wabash to 2526 South Michigan avenue. Harry Branstetter is a popular figure in automobile circles in Chicago, having been active for years in civic and automobile association work. He has handled the Kissel exclusively since 1908 and has probably sold more Kissels than any other man during Kissel's 20 years of existence.

New Canadian Tariff Is Officially Given to U. S.

Trade Hopes for Modification — Tire Makers Given Severe Blow

WASHINGTON, May 1.—Official confirmation of changes in the import tariff duties on automotive equipment imported into Canada has been received by the tariff division of the U. S. Department of Commerce from Trade Commissioner Meeghan at Ottawa.

Under the new budget, effective April 16, the duties were changed as follows:

	General Rates	Preferential Rates
Import duty on passenger automobiles, valued at retail, with standard equipment, complete at not more than \$1,200 each, also motor cars or motor trucks not for railways or tramways for carrying goods only, also motorcycles	35 20	22½ 12½
ALL OTHER motor vehicles	35	27½ 22½ 15

The general tariff rates apply to the United States, which will mean that the new rates on all automobiles costing less than \$1,200 and all trucks will be 20 per cent adv., while over \$1,200 the rate will be 27½ per cent.

A drawback allowance of 25 per cent of the duty paid will be allowed to Canadian automobile manufacturers, on materials used, provided at least 50 per cent of the cost of the finished vehicle is produced in Canada.

Companies which have thus far announced price reductions include: Studebaker, Dodge Brothers, Willys-Overland and Ford.

Tire Makers Hard Hit

MONTREAL, May 1.—Canadian tire makers are now threatened with the loss of a large part of their car equipment business. All the automobiles made in Canada for the export trade were equipped with Canadian tires, and certain firms obtained around 50 per cent of their total business from this source. The upheaval in the automobile business will adversely affect their output. Thus the Canadian rubber companies have received two hard blows almost at once, a 40 per cent drop in raw rubber which they have to absorb, and a curtailment of tire output. No reduction was made in the tariff on tires when the duty on automobile parts were lowered because the rubber manufacturers were able to prove that they had never taken full advantage of the tariff and had sold tires at prices well below the price of American tires plus the duty.

Hope for Modification

OTTAWA, May 1.—There is still reason to believe that there will be amendments to the new motor car schedules looking to the modification of the more obvious injustice of the tariff as it applies to Canadian industries producing materials and parts for automobiles. As

the schedules stand, according to the contention of the spokesmen of the motor car companies, it is cheaper for them to import completed cars for sale in Canada than to bring in parts and assemble them here, using some parts of Canadian production. Even though such principal sections of a car as bodies, chassis, wheels and tops come in under the lower duties, the Canadian maker of smaller parts is hit, as the companies have an inducement to bring in either the finished car or major sections complete. It is understood the Government is studying the question with a view to correcting the situation somewhat in behalf of the manufacturers of parts and materials.

It Made the Wild Rats Wilder

WASHINGTON, May 1.—The gnawing of automobile fenders by hungry rats is reported in a statement issued by the Department of Agriculture here. "An automobile assembling company in Oregon," according to the statement, "found that rats were damaging the fenders of new automobiles in stock. The fenders were covered with a heavy wrapping paper pasted to them, presumably with a starch paste, the edible qualities of which the rats had discovered, and in gnawing it the animals had so scarred the fenders that they had to be re-enamed. Poison was placed and numbers of dead rats were found."

Auburn Earnings Equal To \$4.05 Common Share

AUBURN, Ind., May 1.—Balance sheet of the Auburn Automobile Company at the end of the first quarter, March 3, 1926, showed earnings of \$273,000, after taxes and all charges, equal to \$4.05 per share on the 67,572 shares of common stock outstanding. This is equal to the entire year dividend requirements plus the \$1 extra paid on the stock as of April 2 and compares to \$38,000 net earnings of the first quarter of 1925. The assets of the company total \$5,002,847—consisting of \$3,720,722 net quick assets, of which \$1,020,000 was cash, \$459,000 sight draft on customers, total current liabilities \$896,000, the capital \$1,689,000 and surplus \$1,573,000.

New Paige Dealers

PORTLAND, Ore., May 1.—Cook & Lyon Co., Inc., Oregon distributor of Paige-Jewett, announces the following dealer organization:

Crater Lake Automotive Co., Medford; Bringle Motor Co., Eugene; Truman Motor Co., Salem; Enriken Bros., Bend; Hucks' Service Station, Hood River; F. H. Burnopp, Baker; Miller & Miller, Baker; Harris F. French Motor Co., LaGrande; L. N. Lengacher, Rainier; J. J. Kenney, Astoria; Auto Repair Shop, Vancouver, Wash.; Jewett Motor Co., Kelso, Wash.

General Motors Ranks Third Among 15 Leaders

Based on Earnings Only A. T. & T. and U. S. Steel Are Stand Ahead

NEW YORK, May 1.—General Motors Corporation, with earnings of \$116,016,277 last year, now ranks third among the 15 leading corporations in the United States as ranked according to earnings.

American Telephone & Telegraph is first with \$129,036,334 and United States Steel second with \$117,711,771. Standard Oil of New Jersey is fourth with estimated earnings of \$114,000,000, and Ford Motor Co. is fifth with estimated earnings of \$94,560,397. The Ford figure is estimated on increase in surplus and assuming \$14,670,000 in dividends were paid last year as in 1924, and also that \$20,517,985 which was eliminated from the latest balance sheet was consolidated with other items and not charged out of earnings for 1925.

Thus among the first five companies there are two automobile companies and one oil company whose prosperity is closely linked with that of the automobile industry.

In the amount of capital employed General Motors drops from third to twelfth place and Ford from fifth to eleventh. These concerns are among the four in the first fifteen which have no founded debt.

General Motors stood second in percentage earned on book value of common and percentage earned on net capital employed. The former was 34.10 and the latter 27.13 per cent, and these percentages were exceeded only by the F. W. Woolworth business, whose profits are derived principally from rapid turnover of inventory and minimum fixed investment.

General Motors ranked first in percentage earned on market value of common, 17.9.

Detroit Trade Elects

DETROIT, April 26.—Officers of the Detroit Automobile Dealers' Association have been elected for the 1926-1927 fiscal year, as follows: L. H. Saunders, president; J. A. Schulte, vice-president; W. J. Bomb, secretary; L. F. Mullin, treasurer; W. J. Judd, director; H. H. Shuary, manager, and W. D. Edenburn, assistant manager.

New Chrysler Dealers

TACOMA, Wash., May 1.—American Automobile Company, distributor in Western Washington of Chrysler cars, announces the following dealers:

Eatonville Lumber Co., Eatonville; McKnight Motors, Elma; Andrews Motor Co., Aberdeen; Andrews Motor Co., Hoquiam; Carter's Garage, Centralia; Reinhart Motors, Montesano; Throlis Motor Co., Raymond; Conlon Motor Co., Sumner; Neilson & Hansen, South Tacoma; Liberty Motor Co., Kelso; Liberty Motor Co., Longview; Liberty Motor Co., Kalama; General Motors, Chehalis; Wray & Wray, Olympia.

Vane Urges Sanity and Caution in Dealer Field

N. A. D. A. Manager Says Stock Market Deflation Was Only Natural

ST. LOUIS, May 1.—The need for sanity and caution in the face of the "Wall Street upheaval" is stressed in the April bulletin sent out to the membership of the National Automobile Dealers' Association by General Manager C. A. Vane.

"There is nothing in the Wall Street situation to upset any automobile dealer who is properly organized," Mr. Vane writes, "but at the same time the next few months are periods for caution, judgment and continued effort. There is no reason for any dealer being stampeded in any direction."

"The disturbance in Wall Street," he continues, "was inevitable, just as deflation of numerous gigantic real estate bubbles was inevitable. But the automobile dealer can do many things to protect himself through the next few months, even against a general psychological depression that might be imposed upon him by the easily influenced public. The first is to realize that even if 1926 business shouldn't be as large as 1925, there's still going to be a good, substantial business ahead. Prudence would direct, though, that the dealer take steps to keep his stocks and his capital as liquid as possible."

"First check back over the deliveries of last year. Find out where 1926 stands with relation to 1925. Keep your incoming shipments equalized with your deliveries. No manufacturer who has his own best interests at heart is going to ask dealers to load automobiles with no prospect of selling them. Keep your time sales on a safe basis—third or more down; twelve months or less to pay. Get your service station in shape to handle repair business."

"The future of the automobile business is just as assured as the future of the railroad business or the telephone business. But those industries don't have 'bigger and better years' every year, either. They do rely upon a term of years, though, to pull them higher."

Bjorn Leaves Nash

KENOSHA, Wis., May 1.—The retirement from active affairs of John Bjorn, general superintendent, Nash Motors Co., after a connection lasting 36 years with the concern and its predecessors, was made an event in which Charles W. Nash and the other principal officials took a leading part. A dinner was given in honor of Mr. Bjorn and a substantial testimonial tendered him. He has shared in the prosperity of the Nash industries and intends to rest on the fruits of his labors. Mr. Bjorn was born in Sweden, April 12, 1861, and followed the trade of a mechanic, later becoming a locomotive

engineer. In 1889 he emigrated to America and on April 27, 1890, applied to the late Thomas B. Jeffery at Kenosha for a job in the then Gormely & Jeffery Co. bicycle works. He was put at work as a machinist and earned promotion to executive positions in the shops. When Mr. Nash purchased the Jeffery plant in 1916, Mr. Bjorn was given due recognition and soon was made general superintendent.

Houser Leaves Yellow

CHICAGO, May 1.—Alfred C. Houser, for the last three and a half years advertising manager of the Yellow Truck & Coach Manufacturing Company, has resigned. Mr. Houser has acquired a partnership in the North Shore Buick Co., which controls retail sales in Evanston and other north shore communities of Chicago.

Kirkland Holds A. E. A. Pep Meeting in Indiana

FORT WAYNE, Ind., May 1.—"Ask 'Em to Buy." Using this subject, Henry Kirkland, Chicago, special merchandising representative for the Automotive Equipment Association, told 400 automobile and accessory dealers from northern Indiana, southern Michigan and western Ohio, at a banquet here, that "business is there if you go get it."

Lyman Bellows, general manager of the Van Dorn Electrical Company of Cleveland, spoke on "Efficient Shop Equipment" and Fred Hall, president of the Northwestern Chemical Company, Marietta, Ohio, spoke on "What Price Success?" Richard Sheridan of Chicago, international president of the Automotive Boosters Club, spoke.

The meeting was held to interest dealers in new methods of handling merchandise. The Fort Wayne Iron Store Company and the Wayne Auto Equipment Company arranged the conference, with the Automotive Equipment Association.

M. D. Graham of the A. E. A. held another merchandising meeting the same day in Canton, O., under the auspices of the Dine DeWees Co.

Lupton Sales Contest

PHILADELPHIA, May 1.—E. H. Spears, sales manager of the automotive equipment division of David Lupton's Sons Co., announces a 60-days sales contest. Each salesman selling \$500 worth of Dodge Brothers, Chevrolet, Overland and Hudson-Essex Laps Systems and Lupton Display Counters will be paid an extra 5 per cent commission.

Enlarges Service Plant

SEATTLE, Wash., May 1.—A. R. Tyson, manager of the Oldsmobile Motor company of this city, announces that his service facilities have been enlarged to include a new service room 60 by 128 feet adjoining the old building on Tenth avenue.

Britain Threatens Raise Of Rubber to 42 Cents

Colonial Office Says Output Will Be Restricted If Price Falls Again

NEW YORK, May 1.—Announcement in London that the Colonial Office is continuing through the May quarter the 100 per cent of 1920 standard crude rubber permissible exports from Ceylon and Malaya, but that if rubber during the quarter falls below an average of 21 pence or 42 cents per pound this percentage will be reduced to 80 for the quarter beginning Aug. 1, is regarded here as replete with possibilities for further adverse effects upon the American tire and rubber industry under the Stevenson act.

The promise of a 20 per cent reduction in Colonial rubber exports if the market price does not average 42 cents, in the first place, is on its face an apparent violation of the original understanding as to what the act provided.

Originally the price described as enabling the Colonial rubber industry to remain solvent was one shilling, three pence, or 31 cents. H. Eric Miller, a director of several British rubber companies, says that the British Rubber Growers' Association delegation which visited the United States in 1923 on request of the Rubber Association of America, Inc., assured the Americans that there was enough rubber to go around if the buyers saw to it that the price was maintained at one and three or one and six per pound. Sir Eric, in the April issue of "Anglo-American Trade," adds significantly, "But the buyers ignored their function under the scheme."

Without digressing to state some of the thoroughly logical reasons why American buyers of crude cannot cooperate in such a scheme by doing their part to maintain the market price at certain levels, it is significant that the 42 cents now announced by the Colonial Office as the market price below which Colonial exports must be reduced to 80 per cent is 11 cents higher than the one and three or 31-cent original rock bottom price and five cents higher than the one and six or 37-cent "outside limit" mentioned by the British delegation three years ago.

Federal Aid Work Opens

WASHINGTON, May 1.—With the construction season officially open, work immediately will be resumed on 14,000 miles of Federal-aid highways which are reported as under construction and brought forward from last season, the Bureau of Public Roads of the Department of Agriculture announces. In addition to this, it was stated, there are now nearly 2,000 miles of Federal-aid roads approved for construction upon which work can and probably will be begun at the present season.

Ford of Canada Reports Sales of \$16,191,141

Figures for Last Five Months
Show a Profit of
\$974,316.85

FORD CITY, Ont., May 1.—Following a declaration by Henry Ford that he was in favor of tariff reductions and that the Ford company would get along better with free trade, the Ford Motor Co. of Canada, Ltd., held a directors' meeting, when a report covering the last five months was issued.

Sales and income for the five months ended Dec. 31, 1925, were \$16,191,141.96, an increase of \$5,133,680.97 over the corresponding months in 1924. The profit for this volume of business, however, was only \$974,316.85, due, according to W. R. Campbell, vice-president and treasurer, to manufacturing difficulties incidental to new models and to the development of operations in the Australian subsidiary plants. Output for the period was 26,885 cars and trucks, and 2298 tractors, an increase of 8423 and 838, respectively.

During the changeover a very satisfactory volume of operation was maintained, Mr. Campbell said, the output and sales representing increased business. Operations, however, were not on an efficient manufacturing basis due to the changes occurring. In the remaining seven months of the fiscal year profits show a much better relation to the volume, Mr. Campbell said, though the effect of the tariff reduction in the largest sales months in Canada cannot now be estimated.

All officers were re-elected as follows: Henry Ford, president; W. R. Campbell, vice-president and treasurer; Edsel Ford, second vice-president; C. E. Dickert, third vice-president; E. C. Kanzler, director; P. W. Grandjean, secretary and assistant treasurer.

The balance sheet as of Dec. 31, 1925 shows cash of \$2,269,819.75, receivables of \$4,399,163.86 and inventories of \$7,272,412.70. Total assets are \$42,243,697.05. Surplus of the company was \$24,275,530.29, an increase of \$274,316.85 since July 31, 1925. Dividends paid in the five months aggregated \$700,000.

The fiscal year of the company was changed to close on Dec. 31, instead of July 31, at the last annual meeting, resulting in the five months report as submitted.

Andrea Resigns as I. R. M. Head

NEW YORK, May 1.—Frank A. D. Andrea, head of the radio firm that bears his name, has resigned as president of the Independent Radio Manufacturers, Inc., the organization composed of the licensees under the Hazeltine Neutrodyne patents. The broadening of the Fada radio interests and the necessity of Mr. Andrea's devoting his energies exclusively to the policies and major details of the worldwide structure of his own com-

pany account for the resignation. He remains on the board of directors of the corporation, after having served one full term as president and having been re-elected, in his absence, to serve a second term.

Clymer Patent Upheld

CHICAGO, May 1.—Judge Adam C. Cliffe, in the United States District Court for the northern district of Illinois, has held valid the Clymer windshield spotlight patent, No. 1,501,704, issuing a permanent injunction against Joseph T. Meehan, doing business as the Nonbetter Specialty Co., and Gerald G. Barry, enjoining them from manufacture, sale and use of infringing spotlights. The case was referred to Master Charles B. Morrison for an accounting of profits and damages.

Percy E. Chamberlain Resigns from Marmon



Percy E. Chamberlain

INDIANAPOLIS, May 1.—Percy E. Chamberlain has resigned as sales manager of the Marmon Motor Car Co. He has made no announcement of his plans for the future.

Columbus Salesmen Win

COLUMBUS, O., May 1.—Two Ford salesmen under the jurisdiction of the Columbus Ford branch were winners in the nation wide contest held by the Ford Motor Co., which ended recently. This is taken as a good showing for the Columbus territory as they were in competition with salesmen from all sections. The winners are Edward Jefferis of Greenville, Ohio, and Elza Limes of Ridgeway, Ohio. These winners will be given a trip to the Ford factory at Detroit and each presented with a watch.

U. S. Revenue from Motor Industry Gains in March

Total of \$11,926,195 Collected
or \$4,067,901 More Than
Same 1925 Month

WASHINGTON, May 1.—Internal Revenue collections from the automotive industry for the month of March, 1926, amounted to \$11,926,195.80 or \$4,067,901.62 more than collections for March, 1925, which amounted to \$7,858,294.18, according to statistics just made public here.

An increase of \$27,161,297.58 also is noted in the collections from the automotive industry for the period from July 1, 1925, to March 31, 1926, as compared with the same period in 1925 when the collections were \$84,346,764.25. The collections in the 1926 period were \$111,508,061.83.

Itemized collections from the automotive industry show the following: In March, 1925, collections from "automobile trucks and automobile wagons" netted \$460,541.68 as compared with \$378,113.63 during March, 1926; from "other automobiles and motorcycles in March, 1925, \$5,748,939.17 as compared with \$10,146,760.25 during March, 1926; from "automobile parts and accessories" in March, 1925, \$1,648,813.33 as compared with \$1,401,321.92 during March, 1926.

Total collections from all sources, according to the statistics during March, 1926, totaled \$572,192,925.64 or an increase of \$73,251,311.30 over March, 1925, while an increase of \$183,888,029.45 is noted for the period from July 1, 1925, to March, 31, 1926, which totaled \$2,112,870,180.44 as compared with an aggregate total of \$1,928,982,150.99 for the period from July 1, 1924, to March 31, 1925.

A. A. A. Picks Bigley

ALTOONA, Pa., May 1.—The American Automobile Association sponsoring all professional automobile races in the country, has announced the election of Ed. J. Bigley of this city as official representative of the A. A. A. for the Altoona Speedway Association championship events for 1926. Mr. Bigley's appointment was announced from the Washington headquarters. Mr. Bigley, who was instrumental in the formation of the Altoona organization, has been the A. A. A. representative for the past three years, serving the board with exceptional ability.

Glenn Heads Akron Branch

CLEVELAND, O., May 1.—W. Frank Glenn, for seven years Cadillac distributor in Cincinnati, has been appointed general manager of the Towell Cadillac branch in Akron, according to announcement by T. H. Towell here this week. Mr. Glenn, after leaving Cincinnati spent more than a year in Florida, but said that the call of the north and the automobile business was too great to resist.

Dodge Brothers Quarterly Earnings Are \$5,990,489

Figure Includes Deduction of Graham Brothers Profits to April 30

DETROIT, May 1.—Dodge Brothers, Inc., and subsidiaries for the quarter ended March 31, report net earnings of \$5,990,489 after depreciation and deducting \$668,805 earnings accruing to minority interests in Graham Brothers.

After April 30 these latter earnings will belong to Dodge Brothers because of the purchase of the remaining 49 per cent of Graham Brothers stock.

The first quarter earnings compare with \$6,357,182 net earnings in the first quarter of 1925 and are equal to \$1.49 a share on the 2,434,524 shares of combined Class A and B common outstanding.

The earnings in the 1925 quarter were augmented \$644,632 through the sale of idle real estate.

Total first quarter sales this year were \$6,319,698 compared with \$5,977,569 in the corresponding quarter last year. Other earnings decreased from \$379,613 to \$339,596.

Takes Star Distribution

INDIANAPOLIS, May 1.—The Mattox Motor Sales Company has been organized here and will act as Marion county distributor for the Star, which has never been actively distributed in this territory. The Mattox concern is headed by V. G. Mattox, formerly of Dayton, Ohio, where he had long been associated with the automobile and finance field. He has employed as his service manager Joseph Kissel, who has had extensive Star experience and is a veteran of the automobile business. The Mattox business will be located at 1001 North Meridian street.

Truck Men Plan for Safety

BALTIMORE, May 1.—With representatives of about 20 concerns operating fleets of motor trucks in Baltimore at present, plans were made at a meeting of the Baltimore Safety Council to launch a safety campaign which will extend over a year. The various classes of motor trucks will be formed into groups and the groups having the least accidents will be honored. Special recognition also will be given the drivers who have no accidents.

New Willys Dealers

SPOKANE, Wash., May 1.—Transport Motor Co., Willys-Overland distributor in Spokane and the Inland Empire, has made the following dealer appointments:

Grimm & Son, Connell, Wash.; Miller Bros., Wenatchee, Wash.; Henry Baker, Pullman, Wash.; Meyer & Son, Genessee, Wash.; W. B. Lewis Auto Co., Kalispell, Mont.; Wallace Garage, Wallace, Idaho; C. M. Berg, Latah, Wash.; F. A. Cote, Dayton, Wash.

NEW Automotive Literature

AUTOMOBILES IN OKLAHOMA. A compilation of the number of automobiles, trucks and tractors by makes and by counties in Oklahoma is contained in The 1926 Book in Oklahoma, published by the Oklahoma Farmer-Stockman, Oklahoma City, Okla.

CONSTRUCTIVE CREDIT MERCHANDISING. A pamphlet discussing the growth of installment selling, the text being addressed to all employees of General Motors Acceptance Corporation by Curtis C. Cooper, president of that corporation. The main point made is that before instalment terms were generally published the dealer who sold on credit appraised the purchasing power of his customer and got the best terms possible, whereas today every buyer demands and gets the maximum terms. A return to the old system is recommended. Published by the General Motors Acceptance Corp., Detroit, Mich.

PEGASUS or Problems of Transportation. By Col. J. F. C. Fuller. A book that will appeal especially to those who are interested in the development of modern transportation methods and who are directly or indirectly interested in providing better transportation facilities. Price, \$1. Published by E. P. Dutton & Co., 681 Fifth Ave., New York, N. Y.

AUTOMOBILE SALESMANSHIP. Among the new business books of the season is "Automobile Salesmanship" in two volumes prepared and edited by J. H. Newmark, head of J. H. Newmark, Inc., advertising agency, New York, who has spent nearly 20 years specializing in automobile sales promotion and advertising, 15 of which were with General Motors and Durant companies. Mr. Newmark spent more than 15 years with General Motors companies, dividing that time between Chevrolet, Oakland and other divisions of that corporation. He was also a member of the advisory staff of General Motors, having supervisory control over the advertising and sales of all the companies. These volumes on "Automobile Salesmanship" contain 440 pages of text matter and comprise 10 lessons, together with a hand book which contains mechanical and semi-technical information every automobile salesman should know. The course is divided into 10 main subjects and 49 departments. It is written in the language of and with a special appeal to automobile dealers, salesmen, advertising managers, and service men, as well as those who are considering entering some phase of the industry. The course will be marketed by the Automobile Business Bureau, Fisk Building, New York.

Oregon Fees \$9,500,000

SALEM, Ore., May 1.—Motor vehicle operators in Oregon this year will pay in license fees and gasoline taxes approximately \$9,500,000, or nearly twice as much as the total direct property tax. This was revealed in a statement issued by the secretary of state. If the same percentage of increase in motor fees is maintained during the remainder of the year as up to this time, there will be 240,000 motor vehicles registered by Dec. 31, 1926.

Buick April Demand Is In Excess of Production

Sales Department Declares Dealers' Stocks Are Lower Than for Years at Season

DETROIT, May 1.—The Buick Motor Company announces retail deliveries in the first 10 days of April of 9,639 cars; 1,594 more cars than were shipped from the factory during the same ten days.

Coincident with this announcement comes a statement from the Buick sales department that dealers' stocks are the lowest they have been in years at this season. This is in spite of the fact that all yearly shipment records for Buick were smashed in the first eight months of the fiscal year. At the end of March 182,923 cars had been loaded and dispatched from the factory. Dealers' stocks will be rapidly exhausted at this rate of demand the statement says.

While the production schedule for April is being held at the high level of around 25,000 cars which was set in March, there is no assurance that even this heavy production will be adequate to meet the spring demand which is now gaining momentum.

According to officials, Buick is making every effort to complete a \$2,000,000 expansion program which will make possible a monthly capacity of 30,000 cars.

New Franklin Prices

SYRACUSE, N. Y., May 1.—Price reductions ranging up to \$315 are announced by the Franklin Automobile Co. In addition a four-passenger victoria, carrying the same complete equipment as other models, has been added to the line, first deliveries of the new job being scheduled for June. An expanded list of color selections also is announced. The new price schedule follows:

	New	Old
Sedan	\$2700	\$3000
Oxford Sedan	2865	3172
Auxiliary seat Sedan	2840	3150
Sport Sedan	2910	3225
Coupe	2645	2700
Rumble seat Coupe	2760	2830
Victoria	2790	
Sport Coupe	3050	3250
Touring	2635	2635
Enclosed drive Limousine	2990	3275
Cabriolet	4400	4400
Runabout	2690	2750

North East Expands

ROCHESTER, N. Y., May 1.—Floor space of the North East Electric Co. has been increased to over 600,000 sq. ft. This increase has been necessary because of the expansion in North East business. The erection of a new 6-story addition to the company's property on Lyell avenue adds 80,000 sq. ft. of floor space and is already being used for general manufacturing purposes. Sixty thousand square feet has also been gained by the leasing of a 5-story building formerly occupied by the Van Bergh Silver Plate Co.

Studebaker Profits First Quarter Are \$4,028,920

Sales in Same Period Total \$37,397,451, Gain of 6 Per Cent

SOUTH BEND, Ind., May 1.—Net profits of the Studebaker Corporation for the first quarter of 1926 were \$4,028,920.66 compared with \$3,605,780.54 in the 1925 quarter, an increase of 12 per cent. This net profit remained after all charges, depreciation and reserve after taxes. Profits were at the rate of \$2.08 per common share against \$1.84 in the 1925 quarter.

First quarter sales were \$37,397,451.49 compared with \$35,205,221.24, a gain of 6 per cent.

Regular dividends of 1¼ per cent on the preferred and \$1.25 on the common were paid during the quarter and the remaining earnings of \$1,548,145.66 were carried to surplus, which on March 31 amounted to \$34,957,184.15 against \$31,796,383.58 on March 31 last year.

Preferred stock to the amount of \$155,000 par value was retired during the quarter, reducing the amount outstanding to \$7,830,000.

Current assets on March 31 were \$53,343,639.43 and current liabilities \$13,449,795.19 compared with \$52,152,131.45 and \$12,819,858.95 on December 31.

During the first quarter this year 30,573 cars were sold, compared with 29,937 in the first quarter last year.

Memphis Outlook Bright

ST. LOUIS, May 1.—Conditions in Memphis are very good, according to W. R. Brashear, vice-president in charge of Moon and Diana wholesale branch offices, who has just returned from a week's sojourn there. "Memphis is the greatest inland cotton market in the United States and is also the greatest hardwood lumber center in our country. Both of these industries are in good condition. Prospects for cotton look bright and the hardwood lumber mills are running over time. Non-employment is at a low record and this, of course, is helping liquidate the used car stocks which are about normal for this time of the year."

Western Supply Men Meet

SEATTLE, Wash., May 1.—Representatives of 25 branch stores in the Pacific Northwest of the Western Auto Supply company closed a three-day session tonight with a banquet in the Olympic Hotel. The sessions were devoted to discussion of sales and advertising problems, and among those who addressed the meetings were George Pepperdine, president of the organization, Hal Baker, general sales manager; Harry Press, advertising manager; Ben Wesley, auditor, and Teddy Bowles, manager of the radio department.

New "Neverslip" Factory

BOULDER, Colo., May 1.—A new factory is being constructed here by the Superior Metal Products, Inc., for the manufacturer of "Neverslip" tire chains. The first unit of the factory is a one story building 50x100 feet with a saw tooth type of roof. According to plans of the company, production will start between June 1 and 15. The schedule for the first twelve months calls for 50,000 sets of "Neverslip" chains, which are especially designed to eliminate side skidding.

Stambaugh Heads New Olds Service Division



T. H. Stambaugh

LANSING, Mich., May 1.—In recognition of the close connection between automobile service and sales, these two departments of Olds Motor Works have been correlated by the appointment of a service promotion manager who will work under the direction of D. S. Eddins, general sales manager. T. H. Stambaugh, who has had extensive automotive experience both in sales and service, has been appointed to the position. Mr. Stambaugh is a native of Lansing, and his first position was with the Olds company. After a year with Oldsmobile, Mr. Stambaugh spent three years in banking and then joined the Maxwell Motor Company. Following a year's service in the Marine Corps, Mr. Stambaugh took charge of service in the Denver zone for the Chevrolet Motor Company. He was transferred to the Sheridan Motor Car Company when General Motors organized that division, and later joined the Durant Motor Company of Indiana as service manager. He was transferred to Flint as assistant to the general manager of the Flint Motor Company, which position he held until coming with Oldsmobile.

Overland Six Sales Show Big Gain in 3 Months

Retail Deliveries First Quarter Exceed Those of Same 1925 Period by 7,906

TOLEDO, May 1.—Sales records for the first quarter of this year show that the Overland Six, the sales accomplishments of which in its first year placed it second in volume among all light sixes, has already stepped far ahead of its initial popularity and for the first three months of 1926, retail deliveries have been 7,906 over those of the same period for 1925.

Measured against a sales total for 1925 of 65,000 of these cars during the year, the increase for the first three months alone constitutes nearly 12 per cent of the total business for last year or at the rate of approximately 50 per cent increase for the total period of 1926 already in view.

While no attempt has been made to crowd the market and while production has been kept at a point measured by the actual orders on hand for this car, the production figures at the factory are considerably ahead of the peak production months for last year even at this early period of the buying season.

Dealer stocks in the Overland Six have been practically depleted all over the country and an acute shortage is looked for within the next 30 to 45 days despite the efforts at the factory to keep production up to sales demand.

O'Neill Is Promoted

NEWARK, N. J., May 1.—P. A. O'Neill has been appointed general supervisor of sales for the Studebaker Sales Co. of Newark, according to F. W. Relnecke, president. Mr. O'Neill first became connected with this concern in 1922 as comptroller and later became treasurer. For the time being he will continue to act as treasurer.

Takes Kissel Distribution

HARTFORD, Wis., May 1.—G. A. Kissel, president of the Kissel Motor Car Company, announces the appointment of the Crabb Motor Car Company as Pittsburgh distributor for the Kissel line of sixes and straight eights. The Crabb Motor Car Company is well known in Pittsburgh, having handled high grade cars for years.

New Martin-Parry Quarters

TOLEDO, May 1.—The Martin-Parry Company has leased new quarters for its branch here in the five-story warehouse of the Sam Davis Company at Elm street and the Terminal railroad. Possession will be taken about June 1. H. D. Coulson of the general offices, York, Pa.; A. F. Schoff of the Detroit offices, and George Reitzel, local manager, closed the deal for the new property.

More Cars—More Sales

(Continued from page 12)

of course, as always, those who are widest awake and most progressive will get the major part.

These figures are derived by taking into consideration all types of motor vehicles, including trucks and buses as well as passenger cars used in business in addition to those used only for family transportation.

A survey made by the Milwaukee Journal undertook to determine the cost of operating passenger cars used only for family transportation, excluding fleets and salesmen's cars used extensively in business. The average figures for 1925, in the city of Milwaukee, were: Gasoline, \$94.31; oil, \$16.33; repairs, \$54.84. Total, \$165.48. This, however, did not include such maintenance supplies as tires and accessories. The average mileage of these cars was 6,072.

On the other hand some figures on the annual expenditure for operation and maintenance of passenger cars used exclusively in business are available from the Proctor & Gamble Co., as a result of accurate records kept on 450 cars used in 1925 by the company's salesmen in all parts of the United States. These cars traveled 5,039,000 miles at an average cost of 5.3 cents per mile, including tires, fuel, oil, repair and depreciation. The average mileage of these cars was 11,197 miles and the average cost of maintenance and operation \$593.44, including depreciation. Allowing \$200 a year for depreciation there is left nearly \$400 a year for maintenance and operation.

The market is a tremendous one, but it will be shared by approximately 48,000 passenger car dealers, 1,900 exclusive truck dealers, and other garages, accessory stores and repair shops making a total of approximately 100,000 retail trade units.

There will be keen competition with no refined gold laying around for adventurers to pick up. But 20,000,000 roaring engines and 80,000,000 turning wheels are ready to help the industrious worker gather in his share of greenbacks.

The Big Road—1926 Model

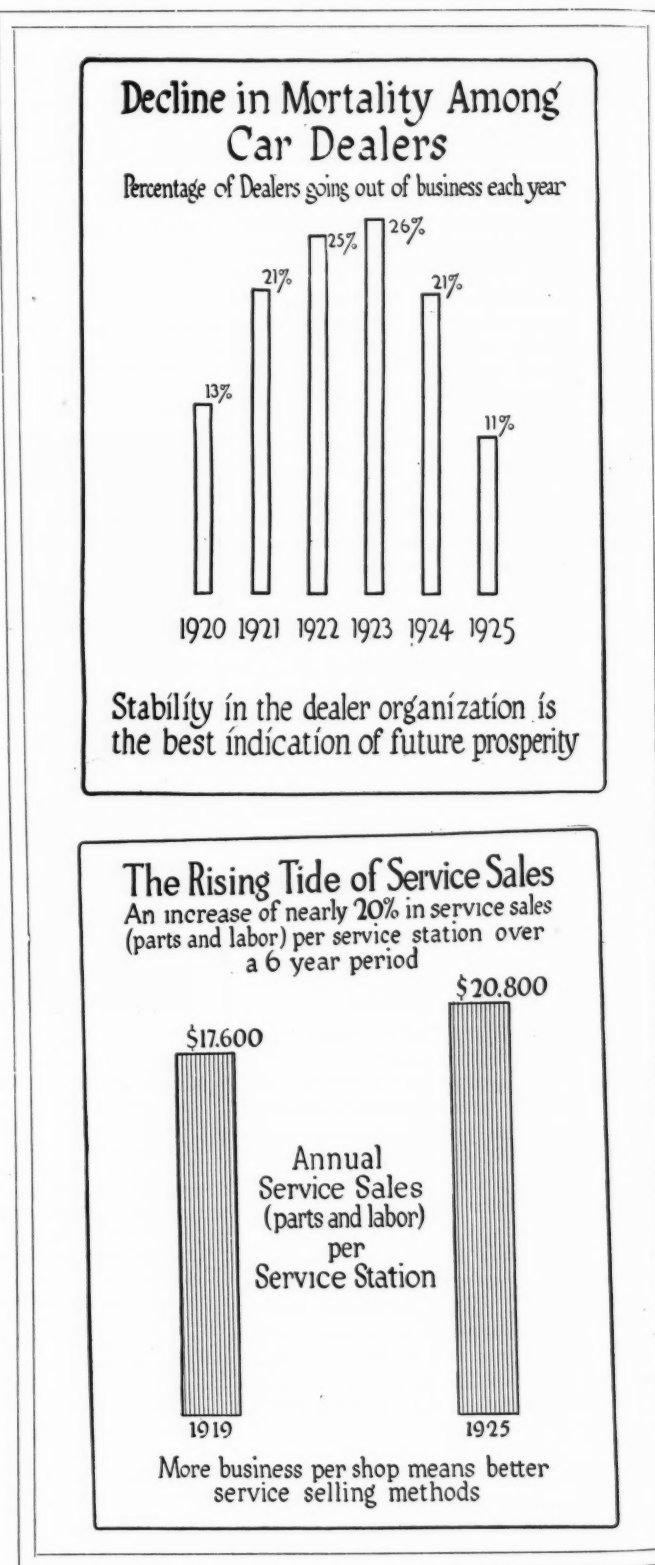
(Continued from page 32)

tween each vehicle. That such a state of affairs multiplies sales resistance is only too apparent.

The difference between investment in motor equipment and highway construction is surprising. Each year the American people pay more than \$7,000,000,000 for purchase, upkeep and operation of motor vehicles. The entire cost of highway construction and maintenance is but 10 per cent of the bill for highway transportation.

Not only to provide for future business, should the automobile dealer be interested in roads, but also in order to remain on friendly terms with the customers he already has sold. H. Colin Campbell, advertising director of the Portland Cement Association, in an address to the Iowa Automotive Merchants' Association, declared that if he should buy a truck and then discover that the road upon which he was expected to drive it were unfit, the dealer who sold him the truck would have to keep out of his way for a long, long time. He declared that no automotive vehicle ever should be sold, without selling with it the importance of proper roads if the efficiency and economy which are built into modern motor cars are to be realized by the purchaser.

Vermillion County, Illinois, was one of the first counties in the United States to vote a road bond issue. This was eight or nine years ago. According to Mr. Campbell, there was at that time a dealer in Danville, the county



seat, representing both cars and trucks, who had not sold a single truck in three years before the bond issue. Danville is the center of an active coal mining district and, with its attending industries, would ordinarily be a good truck market. About 40 miles of paved roads were built the first year, and at the end of that period, this dealer had sold 83 trucks.

That example should prove to every car and truck dealer in America that roads are the backbone of his business.

Test Shows Boulevard Stops Highly Expensive

Promiscuous Use Also Tends to Congest Traffic Rather Than Speed It Up

LOS ANGELES, May 1.—What is the future of the boulevard stop? Following the general adoption of this traffic measure by nearly all cities in southern California, traffic experts are giving the operation of the plan their serious consideration.

Designed to facilitate motoring, the boulevard stop was initiated by the Automobile Club of Southern California for use at heavily traversed intersections to avert accidents, congestion and delay. The plan was effective and has worked so well that now traffic students are beginning to fear that boulevard stops are being placed in effect where the traffic is not sufficiently heavy to warrant asking motorists to come to a full stop.

It is pointed out by students of the situation that to overdo the boulevard stop by applying it promiscuously without regard to volume of traffic will not only defeat the purpose for which it was originally intended, but will tend to increase traffic congestion by slowing down traffic, as well as cause loss of time to individuals and further expense in the operation of cars.

To determine the effect of the existing boulevard stop law on the cost of motoring in general, a series of tests was made recently by the engineering department of the Automobile Club of Southern California. These indicate that the 580,000 motor vehicles in Los Angeles county make approximately 11,600,000 stops daily. These stops cause 45,240 gallons of gasoline to be consumed that otherwise would not be. The cost of this gasoline is \$8,143 daily, or \$3,772,195 yearly. No account was taken of the wear and tear on brake linings and tires.

While the promiscuous use of boulevard stops is questioned by traffic experts, the Automobile Club of Southern California constantly is urging upon motorists the importance of observing reasonable precautions at all street intersections in order to avoid the necessity of making a complete stop at all corners, with the attendant increase in gasoline consumption.

Drivursel on Coast

SAN FRANCISCO, May 1.—The Yellow Drivursel Stations, Inc., recently organized with John Hertz of Chicago as president; William Wrigley, Jr., vice-president; Albert Lasker, Herbert Fleishacker and other capitalists as leading members, will have its headquarters in San Francisco, and will operate a complete chain of automobile-renting stations from San Diego to the Canadian border, according to a statement issued here. Capitalization is \$5,000,000, and Hertz, chairman of the Yellow Truck &

Coach Manufacturing Company, and president of the Yellow Cab Company, of Chicago, is the prime mover in the new corporation. One of the features of the chain of stations will be that a patron may rent a car in one city, drive it to another and there return it to the station of the Drivursel corporation, paying the rental there. This service is new to the coast.

Chrysler Reports Progress

DETROIT, May 1.—Current retail sales of Chrysler cars are at the best rate in the history of the corporation. W. P. Chrysler declared at the annual meeting of the Chrysler Corp. board of directors. During the last year, he said, the dealer organization, now numbering more than 4300, was increased 60 per cent. Dealer stocks of new cars are normal for the volume of business and used cars are at the lowest point in five months, he declared. All directors were re-elected.

M. & A. M. A. Establishes Sales Development Service

NEW YORK, May 4.—The Motor and Accessory Manufacturers Association has established a new service for members. It is a Sales Development Department, which is already at work on activities to assist manufacturers in the profitable distribution of their products.

Announcement of the new department was made today by M. L. Heminway, general manager of the Association, together with appointment of a Sales Development Committee and subcommittees by H. L. Horning, president of the Waukesha Motor Company, and president of the M. & A. M. A.

The new service will take over the work of the Show and Educational Departments and will be in charge of Neal G. Adair, who has headed these two departments for the past two years.

The Sales Development Committee, which will have general supervision over the work is headed by L. A. Safford, vice-president of the McQuay Norris Mfg. Co. and a member of the Board of Directors of the Association. His fellow members are, M. A. Moynihan, Gemser Mfg. Co., W. S. Isherwood, A. C. Spark Plug Co., A. H. Bartsch, American Bosch Magneto Corp., and R. W. Procter, Black & Decker Mfg. Co.

du Pont Promotes Carpenter

WILMINGTON, Del., May 1.—Walter S. Carpenter, Jr., vice-president, treasurer and member of the executive committee of E. I. du Pont de Nemours & Co., has been elected vice-chairman of the executive committee. This office was formerly held by Lammot du Pont, who was recently elected president of the company and chairman of the committee.

Nash Sees 4-Door Cars Replacing Coaches Soon

Manufacturer Also Predicts Four-Wheel Brakes Will Be Universal

SPOKANE, Wash., May 1.—The two-door sedan or coach will ultimately be replaced by the four-door job, Charles W. Nash, president of the Nash Motors Corporation, told a meeting of Northwest dealers here. "Sooner or later all closed cars will have four doors," he declared. "I don't believe any man who has any consideration for his wife wants to ask her to step out in the rain to let a rear seat occupant out."

"When we were bringing out the Ajax I had a two-door body designed. I didn't sleep well one night thinking this problem over and got up at 5 o'clock to drive 10 miles to Racine and on a beautiful two-door job I chalked off the lines for a four-door job. I then called our designer and told him to draw the plans for a four-door job on the suggested lines. That is the reason why the Ajax came out only in the four-door job."

Mr. Nash also predicted that four-wheel brakes will ultimately become standard on all cars.

"The dealers are the backbone of this industry," he continued. "Nothing is quite so important as making satisfied customers by giving good service. Lack of knowledge in diagnosing trouble is an impediment to dealers. The greatest asset you can have is a fellow who can diagnose trouble when a car comes into your garage. You should hire mechanics who educate themselves on the troubles of automobiles just as physicians do with human ills."

Mr. Nash warned his dealers against becoming too self-satisfied, especially in view of the exceptionally large amount of business done by Nash dealers in the Inland Empire territory this spring.

In discussing general business conditions he said that "we are living in a period of business prosperity that has not been better in my 35 years of business experience."

Reo Heads on Coast

SEATTLE, Wash., May 1.—C. E. Eldridge, vice-president and general sales manager of the Reo Motor Car Company, accompanied by Walter Buchen, widely known advertising expert of the east, spent a few days in Seattle on an inspection tour of Reo distributors of the country. While here the visitors held a number of conferences with Fred Lamping of the Lamping-McDonald Motor company, Reo distributor, and Roy E. Puckett, factory representative in this territory. A number of new policies were outlined, including more extensive sales and service facilities, enlarged merchandising methods, and improved representation in this region.

... sold
Dan-
and,
good
built
dealer
dealer
iness.

TRADE ASSOCIATION ACTIVITIES

A. E. A. STRESSES FAIR TRADE

Association Amends By-Laws to Discourage Unfair Tactics

CHICAGO, May 1.—The Automotive Equipment Association, in amending its by-laws, has stressed fair trade as its keynote. The by-laws have been made to read:

"We discountenance manufacturers and manufacturers' representatives offering inducements to the salesman of the jobber, either in cash prizes or gratuities of any kind, or under any condition, either with the consent of the jobber or the salesman's employer as to unwarranted interference with the sales force and the business of the jobber.

"We are unanimously and unequivocally opposed to any manufacturer offering special compensation of any type or kind in any way as an inducement to the jobbers' salesmen."

W. M. Webster, commissioner of the A. E. A., said that at the June convention final action will be taken on the practice of taking goods of a competitor off the shelves, or from a merchant's stock in exchange for the merchandise of the vendor for the purpose of securing trade and commonly known as "lifting," and then sacrificing the merchandise thus secured. This method of merchandising is held unfair by the association, economically unsound and contrary to use.

Heads Ignition Men

ROCHESTER, N. Y., May 1.—Carl Hartman, president of the Starter and Ignition Service Company, has been elected president of the Rochester Automotive Electric Service Association. Other officers elected at the annual meeting were: Vice-president, Frank Beaucaire, of Beaucaire-Mitchell Company; secretary, F. J. Denfold, J. Lawrence Hill Company; treasurer, W. E. Bush, Bush and Cole Company; directors, W. A. Loveney, E. H. Peters and Charles Frodsham.

San Antonio Trades Re-elect

SAN ANTONIO, May 1.—W. A. Williamson, for years connected with automotive lines in San Antonio, was re-elected president of the San Antonio Auto Trades Association at the annual meeting this week. Mr. Williamson is vice-president and general manager of the Texas Retail Automobile Dealers' Association.

Other officers elected are J. F. Hagen, Guarantee Motor Company; vice-president, R. S. Yantis, Yantis Motor Company; second vice-president, William Steinhardt, Crockett Automobile Company; third vice-president, L. D. Ormsby, Ormsby Chevrolet Company, secretary-treasurer. The board of directors is composed of S. W. Smith, Henry H. Bryant, L. F. Birdsong, S. T. Browne, Jack W. Neal, W. G. Hundley, H. P. Dodson, W. P. Bates, W. W. Barry and E. A. Kurtz.

Williams Heads Rochester

ROCHESTER, N. Y., May 1.—James J. Williams, Hupmobile distributor, has been elected president of the Rochester Automobile Dealers' Association, succeeding R. D. Burch. Mr. Williams has been vice-president of the association for the past year and has been a director for

several years. Other officers elected at the annual meeting were: Vice-president, G. Norton Mortimore, Mortimore Motor Car Company, Nash distributor; secretary, Roy G. Miller, Miller-Lee Motors, Overland and Willys-Knight distributor; treasurer, J. E. Hansen, Rochester-Packard Motors, Packard distributor. Directors, E. J. Horton, Dodge distributor; R. D. Burch, Burch-Buell Motor Corporation, Star distributor, and Charles P. Gallagher, Studebaker distributor.

Heman Heads Louisville Tire and Accessory Men



R. D. Heman

LOUISVILLE, May 1.—The Louisville Tire and Accessory Dealers' Association elected officers for the current year at a recent meeting celebrating the first anniversary of the association. The meeting was held in the headquarters of the organization. Officers elected were: President, R. D. Heman, and vice-president, Tom Barbee. R. A. Dean, secretary, and Ben Schulman, treasurer, were re-elected. The newly elected president served as vice-president last year. A meeting is to be held early in May in honor of the retiring president, William Mohlenkamp, and directors are to be named at that time.

Indiana S. A. E. Meets

INDIANAPOLIS, May 1.—At a meeting of the Indiana section of the Society of Automotive Engineering, Ray L. Buckendale, chief engineer of the Timken-Detroit Company; C. H. Calkins, chief engineer of the Baush Machine & Tool Company, and G. H. Acker, chief engineer of the Cleveland Worm & Gear Company, presented papers discussing "Worm Gears and Kindred Drives." Plans were announced for the annual summer meeting at French Lick Springs.

CLEVELAND RE-ELECTS OFFICERS

G. G. Peckham as President and Beckman as Secretary Again

CLEVELAND, O., May 1.—At the annual meeting of the Cleveland Automobile Manufacturers' and Dealers' Association, held this week here, the following officers were re-elected:

G. G. Peckham, president; W. Pitt Barnes, vice-president; R. J. Schmunk, treasurer, and Herbert Buckman, secretary and manager.

This is the sixth consecutive term Mr. Peckham will serve as president of the organization. His predecessor in office was R. J. Schmunk, who now is officiating as treasurer.

Four directors were re-elected to the board. They are: G. G. Peckham, Warner M. Bateman, Charles H. Schreiber and Birkett L. Williams. These directors together with T. H. Towell, O. C. Tyner and William F. Wright, constitute the board of directors.

Records of the association during the last year were reviewed by Manager Buckman and Frank X. Schaut, counsel for the organization.

The organization's concluding spring meeting will be held May 6 in Hotel Hollenden at which time James H. Collins, vice-president of the Chilton Class Journal Company, will speak on "Sources of Dealer Profit." Another speaker is Arthur R. Mogge, Chicago, representing the Automotive Equipment Association's merchandising department.

Boston Tire Men Organize

BOSTON, May 1.—The Boston Tire Dealers' Association has been formed here by a number of men associated in the business of tires and accessories in and around Boston. The constitution and by-laws adopted are planned to allow dealers all over New England to join. Charles I. Feigan, of the Racine Tire Company, was elected president. Other officers are William Marks, vice-president; Albert H. Kessler, secretary; Irving L. Field, treasurer. The board of directors comprise Henry H. Herman, Martin A. Concannon, Richard E. Roeder, Morris Ellis, Elwood D. Ellison, Samuel Zaiser, A. H. Marks, William Karp and David H. Sedersky.

Cook Heads Tire Dealers

MEMPHIS, May 1.—N. C. Cook has been elected manager of the Memphis Tire Dealers' Association that has become an active body since the National Tire Dealers' Association selected Memphis for its meeting in November. B. J. Quigley, president, heretofore has been attending to the duties that will largely devolve on Mr. Cook. The Sunday closing of tire stations, the service relations to the public and co-operation all along the line came in for discussion.

Heads Brooklyn Dealers

NEW YORK, May 1.—W. R. Bellows, Brooklyn and Long Island manager for the Peerless Motor Co., has been elected president of the Brooklyn Motor Vehicle Dealers' Association. Other officers are: Harry N. Pyke and A. J. Graham, vice-presidents; J. E. Pearson, secretary; E. F. McConaha, treasurer; Ralph Ebbert, general manager.

Peugeot Brings Crude Oil 4-Ton Truck to America

Improved Engine Has Wide Range of Speeds Unlike Most of Same Type

NEW YORK, May 1.—Interest in the crude oil type of engine for motor trucks, motor boats and even for use on passenger cars, is likely to be intensified in this country with the arrival in America of a 4-ton Peugeot truck from the great French plants of that name. It will be exhibited to interested manufacturers and prospective users by Lucien Rosengart, vice-president of the Peugeot Automobile Company, who has just returned from Detroit with samples of the "baby" passenger car, another revolutionary product of the big French corporation.

The Peugeot crude oil engine was first exhibited in 1921 at the Paris Automobile Show, where it attracted a great deal of attention because of its ability of work on any kind of oil, while weighing per horsepower approximately the same as any gasoline power unit, roughly 10 pounds per horsepower. Since that time the engine has been subjected to steady study and refinement and different models have shown remarkable ability in trying tests.

Among the trials to which the engine was submitted was its use in a Paris bus weighing eight tons. In regular service it covered 100 miles a day for 15 days without a single mishap, the starting, acceleration and average speed being declared to be as good as when the same vehicle was propelled by a gasoline motor. In another test one of these engines was fitted on a standard passenger car and accomplished a 700-mile run with five passengers and heavy baggage, making good average speed.

The engine works on the two-stroke cycle, and is of the constant volume combustion type, the fuel being injected. Using the two-cycle principle, it has been found necessary to use only two cylinders for truck propulsion, though the use of additional cylinders is merely a matter of mechanical routine. A perfect mixture of air and fuel is obtained by means of a specially shaped combustion chamber. The burned gases are expelled by the rush of pure air entering the cylinder and the oil is injected almost at the moment of highest compression. The ratio of compression is 12 to 1, and the heat developed ignites the mixture.

Unlike other crude oil engines, the Peugeot has a wide range of speeds, governed by a simple mechanism which acts on the fuel pump. It is the belief of the Peugeot engineers that the fuel pump and injector used on this engine will eventually replace the carburetor on all internal combustion engines.

New Oakland Dealers

PONTIAC, Mich., May 1.—The follow-

May 6, 1926

Coming Motor Events

Automobile Shows

1927 NATIONAL SHOWS

New York.....Jan. 8-15
Chicago.....Jan. 29-Feb. 5

Fargo, N. D.....July 12-17
Denver, Colo.....Aug. 3-6
New York.....Sept. 13-18
(Radio World's Fair)

Chicago.....Nov. 15-19
(Annual show and convention of National Standard Parts Association.)

Races

Charlotte, N. C.....May 10, 1926
Indianapolis, Ind.....May 31, 1926
Altoona, Pennsylvania.....June 12, 1926
Salem, New Hampshire.....July 5, 1926

ing new dealers have been appointed by the Oakland Motor Car Company:

J. W. McNees Motor Co., McComb, Miss.; Voisin Motor Sales, Inc., Whiting, Ind.; White & Sarber Auto Sales, Gary, Ind.; Frank R. Joll, South Fork, Pa.; Little Motor Co., Cross Hains, Tex.; Thompson-Stanton Motor Co., Pittsburgh, Kans.; Putnam Sales Co., Williamson, N. Y.; Marinus Nelson, Ashland, Neb.; Kelms Garage, Stillwater, Minn.; R. A. Scherer, Port Allegany, Pa.; George Sosnowy, Buffalo, N. Y.; Val Hoerner, Mandan, N. D.; B. O. McDonald, Tekamah, Neb.; Webster Grove Motor Co., Webster Grove, Mo.; Hildebrandt Fields Co., Marion, O.

Hedeen Motor Sales, Bucyrus, O.; C. C. Follette, Jr., Forest Grove, Ore.; J. S. Havlin, Barnesville, O.; Malcolm O. Kuhnsman, Slaton, Pa.; George Woodward, Breinigsville, Pa.; Chas. F. Mundt, Newberry, Mich.; E. A. Marcy, Gobles, Mich.; Shaw Motor Sales, Birmingham, Mich.; Gilby Motor Co., St. Helens, Ore.; Eldersville Motor Supply, Eldersville, Pa.; Bert Hall Motor Co., Oregon City, Ore.; Ray Murray Motor Co., Harlingen, Tex.; Paul Christenson, Little Falls, Minn.; Climax Garage, Climax, Minn.; McCoy-Graham Motor Co., Inc., Atmore, Ala.; The Cogswell Service Co., Cogswell, N. D.; The Dakota Auto Company, Jamestown, N. D.

Johnson Motor Co., Opp, Ala.; Washington Motors, Inc., Seattle, Wash.; J. W. Cease, Jr., Phillipsburg, N. J.; Kyle Auto Sales Co., Johnson City, Tenn.; Harrell Bros. Auto Co., Wilmington, N. C.; George W. Gilbert Motor Co., Charleston, S. C.; DuPage Wheaton Motors, Wheaton, Ill.; Barnes-Young Motor Co., Charlotte, N. C.; R. D. Forbes, Huntington, W. Va.; J. F. Fox, Watseka, Ill.; Valpo Motor Service, Valparaiso, Ind.; The Luttrell Co., Washington, D. C.; The Mid-State Motor Co., Kearney, Neb.; Bourquin-Anderson, Inc., Madrid, Neb.; Welday & Son, Delphi, Ind.; C. Davenport Smith, Redlands, Cal.

W. H. Settle Sons Motor Co., Norwood, O.; Hunsberger & Rhodes, Barborton, O.; Lorditch Motor Co., Lakewood, O.; Dornier-Berger Motor Co., Cleveland; Central Garage, Albion, Pa.; Daggett & Moore, Yreka, Cal.; LaPlace & LeClair, San Francisco, Cal.; Kitzrow Motor Co., Milwaukee; T. G. Larson & Sons, Valders, Wis.; E. J. Puls, New Liberty, Ia.; South Elmhurst Garage, Elmhurst, Ill.; Kraehmer Motor Co., Galena, Ill.; Warren G. Stauffer, Topton, Pa.; Reiner Filling Station, Tripp, S. D.; H. K. Meisenhoelder, Parkston, S. D.; P. E. Nelson, Baltic, S. D.; H. J. Reichling, Emery, S. D.

Rock County Auto Co., Inverne, Minn.;

Atlantic City, N. J.....July 17, 1926
Altoona, Pennsylvania.....Sept. 6, 1926
Salem, New Hampshire.....Sept. 25, 1926
Atlantic City, N. J.....Oct. 27, 1926
Charlotte, N. C.....Nov. 11, 1926
Los Angeles, Cal.....Nov. 25, 1926

Conventions

Texas Automotive Dealers' Association, Tenth annual, Galvez Hotel, Galveston, Tex., May 12-13.

National Motor Regrinders' & Rebuilders' Association, annual, Indianapolis, May 28-29.

Automobile Body Builders' Association, annual, Hotel Statler, Detroit, June 8-10. Exhibition in connection.

Automotive Equipment Association summer convention, Mount Royal Hotel, Montreal, Canada, June 14-19.

American Electric Railway Association, 45th annual, Cleveland, O. Oct. 4-8. Exhibition in connection.

Hollywood Motor Sales Co., Hollywood, Fla.; Triangle Motor Sales Co., Olathe, Kans.; Drinnan Garage Co., Inc., West New Brighton, N. Y.; R. A. S. Motors, Scarsdale, N. Y.; Kunkle & Stapleton, Cheyenne, Wyo.; Miller Motor Co., Colorado Springs, Colo.; U. S. E. Auto Service, Inc., Fitchburg, Mass.; Somerville Motor Mart, West Somerville, Mass.; Dero & Huffman, Minneapolis.

Fisherman & Holm Motor Co., Minneapolis; S. M. Gay, Auburn, Ind.; Oxford Auto Co., Fort Wayne, Ind.; Truxell Motor Sales, Detroit; Greene & MacKercher, Belding, Mich.; Ellis-Powers-Walker Co., Monroe, Cal.; Schroeder-Lindgren Auto Co., Grand Haven, Mich.; Mobile Auto Sales, Mobile, Ala.; Hall Motor Company, Sedalia, Mo.; Thompson & Shields Sales Co., Salem, Ind.; Hillerage & Company, Scotts Bluff, Neb.; Geo. L. Evans, Inc., Nashville, Tenn.; Harvard Motor Sales, Harvard, Ill.; Platteville Motor Co., Platteville, Wis.; White & Blackmore, Inc., Detroit; W. H. Semeyn Motor Co., Grand Rapids, Mich.; Industrial Sales Co., Detroit.

Condemn I. C. C. Plan

DETROIT, April 26.—Traffic managers of the National Automobile Chamber of Commerce at the April meeting here condemned pending legislation in Congress that would make appointments to the Interstate Commerce Commission a regional matter. It is felt that such an arrangement would tend to weaken the personnel and effectiveness of the commission as compared with the present plan of presidential appointments subject to confirmation by the Senate. The meeting voted to support the National Industrial Traffic League in favoring adequate public representation in any new plan of handling wage disputes between railroads and their employees.

Used Department Revamped

COLUMBUS, O., May 1.—The used car department of the Columbus Buick Co., central Ohio distributor for the Buick, has been reorganized and placed in charge of Woodrow Shaffer, formerly with the Winfield S. Jewell Co., Studebaker distributors.

The Automobile Dealer's

*A condensed catalog of the current vehicles
manufacturers, cylinder types and range of prices.
en on pages*

Name and Address of Manufacturer and

NAME OF CAR	MANUFACTURER		Models	Number of Cylinders and Type	PRICE RANGE	
	Name	Address			Lowest	Highest
Ajax.....	Ajax Motors Co.....	Packard Avenue and 17th Street. Racine, Wis.	6	6-Vert	\$ 865	\$ 995
Apperson.....	Apperson Bro. Automobile Co.....	Kokomo, Ind.....	{6 Str. 8	6-Vert 8-Vert	1575 1995	2100 2595
Auburn.....	Auburn Automobile Co.....	Auburn, Ind.....	{4-44 6-66 8-88	4-Vert 6-Vert 8-Vert	1145 1395 1695	1195 1745 2045
Buick.....	Buick Motor Co.....	Hamilton Avenue..... Flint, Mich.	{Standard Master	6-Vert 6-Vert	1125 1250	1295 1995
Cadillac.....	Cadillac Motor Car Co.....	2860 Clark Avenue..... Detroit, Mich.	314	8-Vee	2995	4485
Case.....	J. I. Case Threshing Machine Co.....	Racine, Wis.....	{JIC Y	6-Vert 6-Vert	1840 2225	2590 2975
Chandler.....	Chandler Motor Car Co.....	St. Clair Avenue and E. 131st Street. Cleveland, Ohio	35	6-Vert	1545	2095
Chevrolet.....	Chevrolet Motor Co.....	General Motors Bldg..... Detroit, Mich.	X	4-Vert	510	765
Chrysler.....	Chrysler Corp.....	341 Massachusetts Avenue..... Detroit, Mich.	{70 88 80	6-Vert 4-Vert 6-Vert	1395 845 2645	2095 995 3695
Cleveland.....	Cleveland Automobile Co.....	London Road and Euclid Avenue..... Cleveland, Ohio	{31 43	6-Vert 6-Vert	945 1145	1250 1345
Cunningham.....	James Cunningham Son & Co.....	13 Canal Street..... Rochester, N. Y.	V-6	8-Vee	6150	8100
Dagmar.....	M. P. Moller Motor Car Co.....	Surrey and Summit Avenue..... Hagerstown, Maryland	{6-60 6-70	6-Vert 6-Vert	1785 3500	2445 4750
Davis.....	George W. Davis Motor Car Co.....	1200 W. E. Street..... Richmond, Ind.	{92 93	6-Vert 6-Vert	1495 1285	1795 1285
Diana.....	Moon Motors Co.....	4400 N. Main Street..... St. Louis, Mo.	Str. 8	8-Vert	1795	2895
Dodge.....	Dodge Brothers.....	7900 Jos Campau Avenue..... Detroit, Mich.		4-Vert	795	1075
Duesenberg.....	Duesenberg Motors Co.....	W. Washington and Harding Streets Indianapolis, Ind.	Str. 8	8-Vert	6650	*
DuPont.....	DuPont Motors Inc.....	Moore, Pa.....	D	6-Vert	2600	3400
Durant.....	Durant Motor Co. of N. J.....	Elizabeth, N. J.....	A-22	4-Vert	730	995
Elcar.....	Elcar Motor Co.....	Beardsley Avenue..... Elkhart, Ind.	{4-55 6-65 8-81	4-Vert 6-Vert 8-Vert	1095 1295 2095	1395 1695 2765
Essex.....	Hudson Motor Car Co.....	12601 E. Jefferson Avenue..... Detroit, Mich.	6	6-Vert	789†	789†
Flint.....	Flint Motor Co.....	Flint, Mich.....	{E-80 Z-18 B-60	6-Vert 6-Vert 6-Vert	1595 1085 1285	2395 1185 1575
Ford.....	Ford Motor Co.....	N. Woodward Avenue..... Detroit, Mich.	T	4-Vert	290	590
Franklin.....	H. H. Franklin Mfg. Co.....	101 W. Marcellus Street..... Syracuse, N. Y.	11	6-Vert	2635	4400
Gardner.....	Gardner Motor Co. Inc.....	Main and Rutgers Streets..... St. Louis, Mo.	{6-B 8-B	6-Vert 8-Vert	1395 1795	1695 2795
Gray.....	Gray Mfg. Co.....	Mack and Terminal R. R..... Detroit, Mich.	S	4-Vert	845	845
Hertz.....	Yellow Cab Mfg. Co.....	5801 W. Dickens Avenue..... Chicago Ill.	D-1	6-Vert	*	*
Hudson.....	Hudson Motor Car Co.....	12601 E. Jefferson Avenue..... Detroit, Mich.	Super 6	6-Vert	1209†	1695†
Hupmobile.....	Hupp Motor Car Corp.....	Detroit, Mich.....	{A-1 E-2	6-Vert 8-Vert	1325 1945	1385 2445
Jewett.....	Paige Detroit Motor Car Co.....	W. Warren Avenue and Terminal R. R..... Detroit, Mich.	New Day	6-Vert	995	1095
Jordan.....	Jordan Motor Car Co.....	1054 E. 152nd Street..... Cleveland, Ohio	{Series A Series J	8-Vert 8-Vert	2275 1845	2675 1945

Passenger Car Directory

giving makes, models, names and addresses of
Body types and mechanical specifications are giv-
76 to 80.

Price Range of 1926 Passenger Car Models

NAME OF CAR	MANUFACTURER		Models	Number of Cylinders and Type	PRICE RANGE	
	Name	Address			Lowest	Highest
Kissel.....	Kissel Motor Car Co.....	400 Kissel Avenue..... Hartford, Wis.	{55 75	6-Vert 8-Vert	1585 1985	3185 3585
Lexington.....	Lexington Motor Co.....	Connersville, Ind.....	6-50	6-Vert	1895	2245
Lincoln.....	Ford Motor Co, Lincoln Division.....	N. Woodward Avenue..... Detroit, Mich.	8	8-Vee	4000	5300
Locomobile.....	Locomobile of America, Inc.....	1 S. Main Street..... Bridgeport, Conn.	{48 90 Jr. 8	6-Vert 6-Vert 8-Vert	7460 5500 1785	10300 7500 2285
Marmon.....	Marmon Motor Car Co.....	1101 W. Morris Street..... Indianapolis, Ind.	74	6-Vert	3295	3975
McFarlan.....	McFarlan Motor Co.....	Mount and High Streets..... Connersville, Ind.	{SV TV Str. 8	6-Vert 6-Vert 8-Vert	2650 5400 2650	3489 9000 4600
Moon.....	Moon Motor Car Co.....	4400 N. Main Street..... St. Louis, Mo.	{London Series A	6-Vert 6-Vert	1985 1195	2540 1595
Nash.....	Nash Motors.....	Kenosha, Wis.....	{Advanced Special	6-Vert 6-Vert	1340 1115	2090 1445
Oakland.....	Oakland Motor Car Co.....	240 Oakland Avenue..... Pontiac, Mich.	6	6-Vert	1025	1295
Oldsmobile.....	Olds Motor Works.....	Lansing, Mich.....	30	6-Vert	875	1115
Overland.....	Willys Overland, Inc.....	Toledo, Ohio.....	{91 93	4-Vert 6-Vert	495 895	695 1095
Packard.....	Packard Motor Car Co.....	E. Grand Boulevard and Belt Line..... Detroit, Mich.	{6 8	6-Vert 8-Vert	2585 3750	2885 5775
Paige.....	Paige Detroit Motor Car Co.....	W. Warren Avenue and Terminal R. R..... Detroit, Mich.	6-72	6-Vert	1295	2295
Peerless.....	Peerless Motor Car Co.....	Quincy Avenue and S. E. 93rd Street..... Cleveland, Ohio	{6-72 6-80 8-69	6-Vert 6-Vert 8-Vee	1895 1395 2995	2995 1795 3795
Pierce Arrow.....	Pierce Arrow Motor Car Co.....	1695 Elmwood Avenue..... Buffalo, N. Y.	{33 80	6-Vert 6-Vert	5250 2895	7000 4045
Pontiac.....	Oakland Motor Car Co.....	240 Oakland Avenue..... Pontiac, Mich.	Six	6-Vert	825	825
Reo.....	Reo Motor Car Co.....	South Washington Avenue..... Lansing, Mich.	1T6	6-Vert	1395	1745
Revere.....	Revere Motors Co.....	Logansport, Ind.....	{25 1M	6-Vert 4-Vert	2750 3200	3800 4000
Rickenbacker.....	Rickenbacker Motor Co.....	Detroit, Mich.....	{E B-8	6-Vert 8-Vert	1635 2095	2195 5000
Roamer.....	Roamer Motor Car Co.....	1900 Reed Street..... Kalamazoo, Mich.	{8-80 6-50 8-88 4-75E 6-54E	8-Vert 6-Vert 6-Vert 4-Vert 6-Vert	1985 1295 1995 2985 1985	1985 1695 3485 3485 2950
Rolls Royce.....	Rolls Royce of America, Inc.....	Springfield, Mass.....	S. Ch.	6-Vert	*	*
Stanley.....	Steam Vehicle Corp. of America.....	Allentown, Pa.....	262	2-Steam	2650	3400
Star.....	Durant Motors Co. of N. J.....	Elizabeth, N. J.....	{4 Std. 6	4-Vert 6-Vert	525 725	795 975
Stearns Knight.....	F. B. Stearns Co.....	12435 Euclid Avenue..... Cleveland, Ohio	{B 75 95	4-Vert 6-Vert 6-Vert	1595 1875 2395	2095 2475 3150
Studebaker.....	Studebaker Corp.....	Bronson and Main Street..... South Bend, Ind.	{Sta. 6 Spec. 6 Bld. 6	6-Vert 6-Vert 6-Vert	1125 1395 1495	1395 1895 2225
Stutz.....	Stutz Motor Car Co. of America, Inc.....	10th Street and N. Capitol Avenue..... Indianapolis, Ind.	AA	8-Vert	2995	2995
Vellie.....	Vellie Motors Corp.....	109 Vellie Place..... Moline, Ill.	60	6-Vert	1425	2150
Wills Ste Claire.....	Wills Sainte Claire, Inc.....	Marysville, Mich.....	{T6, W6 BC&D 68	6-Vert 8-Vee	2700 2885	3750 4150
Willys Knight.....	Willys Overland Inc.....	Toledo, Ohio.....	{66 70	6-Vert 6-Vert	1750 1295	2495 1495

*Prices on application.

†Detroit delivered Price. Manufacturers do not quote F. O. B. prices.

Electrical Equipment

Including Ignition Systems, Generator, Starter,

MAKE AND MODEL	IGNITION SYSTEM				GENERATOR AND STARTER						STARTING MOTOR				BATTERY				Hd. Lt. Lens	Lamp Bulbs Mazda Nos.							
	Make	Model	Current Source	Spark Control	Make	Model	Generator			Starter		Lock Torque		No Load Bench Test		Make	Length	Width		Height	Volts and Amps. Hrs. Capacity	Outside Diameter	Head Light	Dim. if Sep. Lamp	Cowl	Tail	Instr. Board
							Norm. Chg. Rate	R. P. M.	Field Fuse Amp.	Model	Engagement	Lb. Ft.	Voltage	Amps.	R. P. M.													Voltage	Amps.
Ajax	A-Lite	IG4110	Bat.	Auto	A-Lite	GT4004	15	1800	...	MP4104	Bendix	15	3.5	705	3500	6	40	USL	9 1/2 x 6 3/4 x 9 3/4	6-92	8	1129	N	63	63	...	
Apperson	Remy	626P	Bat.	Hand	Remy	941B	11	1900	...	720J	Bendix	15	3.15	570	6000	5	65	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/4	1129	N	63	63	64	
Apperson, St. Away	Remy	648A	Bat.	Hand	Remy	917V	11	1900	...	720J	Bendix	15	3.15	570	6000	5	65	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/4	1129	N	63	63	64	
Auburn	Remy	366T	Bat.	Hand	Remy	941Q	14	1800	...	714A	Bendix	12	3.63	475	5000	5	65	USL	9 1/2 x 7 1/4 x 9 3/4	6-80	8 1/2	1158	N	63	63	63	
Auburn	Remy	636F	Bat.	Auto	Remy	941D	12	2000	...	720Q	Bendix	15	3.15	570	6000	5	65	USL	10 1/2 x 7 1/4 x 9 3/4	6-90	8 1/2	1158	N	63	63	63	
Auburn	Remy	648B	Bat.	S-Au	Remy	941D	12	2000	...	720Q	Bendix	15	3.15	570	6000	5	65	USL	10 1/2 x 7 1/4 x 9 3/4	6-90	8 1/2	1158	N	63	63	63	
Buick	Std. 6	Delco	Spec.	Bat.	S-Au	Delco	317	15	1600	...	316	S-Gear	18.2	3.2	...	...	6	60	Exide	9 1/2 x 7 3/8 x 9 1/8	6-90	8 3/4	1110	63	63	63
Buick	Master	Delco	Spec.	Bat.	S-Au	Delco	317	15	1600	...	316	S-Gear	18.2	3.2	...	...	6	60	Exide	10 1/4 x 7 3/8 x 9 1/8	6-105	8 3/4	1110	63	63	63
Cadillac	314	Delco	5281	Bat.	H&A	Delco	315	15	1000	...	314	S-Gear	18.2	3.2	6	60	Exide	20 1/2 x 5 1/2 x 8 3/4	6-130	10 3/8	1129	63	N	63	63
*Case	Y	Delco	5208	Bat.	S-Au	Delco	258	...	...	200	Bendix	...	...	...	...	...	...	Willard	11 7/8 x 7 1/2 x 10	6-132	9 1/2	1129	N	63	63	63
*Case	JIC	Delco	5256	Bat.	S-Au	Delco	258	...	...	181	Bendix	...	...	...	...	...	...	Willard	10 3/8 x 7 1/2 x 10	6-118	9 1/2	1129	N	63	63	63
Chandler	A-Bos.	T6300	Bat.	S-Au	A-Bos.	1283	8	700	7 1/2	959	Bendix	12	4	450	3000	6	60	Presto	10 1/2 x 7 3/8 x 7 1/8	6-105	9	1129	81	63	63	63	
Chevrolet	Remy	366P	Bat.	Hand	Remy	950B	13	1800	...	710C	Bendix	10	3.7	450	4500	5	70	Varies	9 3/8 x 7 1/4 x 9 3/8	6-90	8	1129	N	63	63	63	
Chrysler	Remy	634A	Bat.	S-Au	Remy	951C	14	1900	...	712D	S-Gear	11	3.6	450	5000	5	70	Willard	10 1/4 x 7 1/4 x 9 3/4	6-100	8 7/8	1129	...	63	...	...
Chrysler	Remy	656B	Bat.	S-Au	Remy	941C	18	2500	...	724C	Bendix	...	...	...	...	...	...	Willard	10 1/4 x 7 1/4 x 9 3/4	6-100	8	1129	...	63	...	...
Chrysler	Remy	656D	Bat.	S-Au	Remy	945B	12	1500	...	732A	S-Gear	32	3.0	600	2000	5	65	Presto	...	6-160	8	1110	...	63	...	...
Cleveland	A-Bos.	T6332	Bat.	S-Au	A-Bos.	1069	8	850	5	970	Bendix	9 1/2	4	400	4000	6	60	Presto	9 1/2 x 7 x 9 1/2	6-100	8 1/2	1129	N	63	63	63	
Cleveland	A-Bos.	T6320	Bat.	S-Au	A-Bos.	1068	8	850	5	970	Bendix	9 1/2	4	400	4000	6	60	Presto	9 1/2 x 7 x 9 1/2	6-100	8 1/2	1129	N	63	63	63	
Cunningham	V-6	Delco	001281	Bat.	S-Au	Delco	182	20	...	...	183	Bendix	...	...	...	...	...	Willard	11 7/8 x 7 1/2 x 10	6-132	11	1129	N	81	63	...
*Dagmar	6-60	Deleo	550	Bat.	Hand	Deleo	258	...	...	181	Bendix	...	...	...	...	...	...	Exide	10 3/8 x 7 1/2 x 10	6-111	10	1129	...	N	63	64
*Dagmar	6-70	Deleo	564	Bat.	Hand	Deleo	258	...	...	200	Bendix	...	...	...	...	...	...	Exide	10 3/8 x 7 1/2 x 10	6-111	10	1129	81	N	63	64
Davis	92	Deleo	5294	Bat.	S-Au	Deleo	325	12	1600	N	313	Bendix	11	3	450	...	4	60	Willard	10 1/4 x 7 1/4 x 9 3/8	6-100	8 1/8	1110	N	...	...
Davis	93	Deleo	5294	Bat.	S-Au	Deleo	325	12	1600	N	313	Bendix	11	3	450	...	4	60	Willard	10 1/4 x 7 1/4 x 9 3/8	6-100	8 1/8	1110	N	...	...
Diana	St. 8	Deleo	5282	Bat.	S-Au	Deleo	325	15	1600	...	313	Bendix	13	3.2	6	50	USL	11 3/4 x 7 1/2 x 9 3/4	6-142	9 3/8	1129	N	63	63	63
Dodge Brothers	N-East	O-10004	Bat.	Hand	N-East	GA3804A	7	1800	10	GA3804A	Chain	35	...	225	...	...	...	Varies	12 3/8 x 7 3/8 x 10 1/8	6-150	...	1141	N	67	67	67
Duesenberg	St. 8	Deleo	242	Bat.	S-Au	Deleo	242	17	1600	N	200	Bendix	4	60	Exide	10 1/4 x 7 3/8 x 9 3/8	6-100	10	1129	...	63	63	63
DuPont	D	A-Bos.	TM662	Bat.	Hand	A-Bos.	1047	...	...	930	Bendix	...	...	...	...	...	...	Westin	10 3/8 x 7 x 9 1/4	6-95	8 3/4	1129	81	63	63	63
Durant	A-22	A-Lite	IG4018A	Bat.	Hand	A-Lite	GH	16	2400	N	MF	Bendix	12 1/2	4	500	3250	5	65	USL	9 3/8 x 7 1/2 x 9 3/4	6-92	8 1/2	1129	N	63	63	64
Elcar	4-55	A-Lite	IG4051A	Bat.	S-Au	A-Lite	GJ	17	1700	5	MM	Bendix	16 1/2	4	700	3750	5	65	USL	9 1/2 x 7 1/4 x 9 3/4	6-84	8	1129	81	62	63	64
Elcar	6-65	Remy	636H	Bat.	Auto	Remy	941D	12	2000	...	720Q	Bendix	15	3.15	570	6000	5	65	USL	9 1/2 x 7 1/4 x 9 3/4	6-84	8	1129	81	62	63	64
Elcar	8-81	Remy	648A	Bat.	S-Au	Remy	941D	12	2000	...	720Q	Bendix	15	3.15	570	6000	5	65	USL	10 1/2 x 7 1/2 x 9 3/4	6-106	9 3/8	1110	81	63	64	64
Essex	6	A-Bos.	T6324	Bat.	Auto	A-Bos.	1067	8	850	N	964	Bendix	9 1/2	4	400	4000	6	60	Presto	9 1/2 x 7 1/4 x 8	6-105	8	1129	...	N	61	61
Flint	Z-18	A-Lite	IG4118A	Bat.	Hand	A-Lite	GY	15	1500	5	MP	Bendix	17 1/2	4	800	5660	5	70	USL	9 1/2 x 7 1/4 x 9 3/4	6-92	8 1/2	1129	N	63	63	63
Flint	B-60	A-Lite	IG4118A	Bat.	Hand	A-Lite	GY	15	1500	5	MN	Bendix	16 1/2	4	700	3750	5	65	USL	9 1/2 x 7 1/4 x 9 3/4	6-92	8 1/2	1129	N	63	63	63
Flint	E-80	DeJon	IG4121	Bat.	Hand	DeJon	Gra4101	15.2	1200	5	MN4110	Bendix	12	3.10	570	...	5	45	USL	10 1/2 x 7 1/2 x 9 3/4	6-117	9 1/2	1129	N	63	63	63
Ford	T	Own	T	B&M	Hand	Own	T	12	1220	...	T	Bendix	15	...	720	5400	5	85	Own	9 1/4 x 7 3/8 x 9 3/4	6-80	8 3/8	1158	N	63	63	63
Franklin	A-Kent	7	Bat.	S-Au	Dyneto	C.G.	15	...	N	D-H	Bendix	28	3.7	650	3800	6	50	Willard	12 1/2 x 7 1/4 x 9 3/8	6-135	10 1/4	1129	81	63	61	61	
Gardner	6B	Remy	636F	Bat.	S-Au	Remy	941-B	20	1450	...	720J	Bendix	15	3.2	570	6000	5	65	Presto	9 1/2 x 7 3/8 x 9 3/4	6-93	9 1/2	1129	N	63	63	63
Gardner	8B	Remy	648-A	Bat.	S-Au	Remy	917-V	20	1900	...	720J	Bendix	15	3.2	570	6000	5	65	Presto	13 1/2 x 7 1/2 x 9 3/8	6-135	9 1/2	1129	N	63	63	63
Gray	S	A-Lite	IG4112A	Bat.	Auto	A-Lite	GW	15	1900	5	MO	Bendix	12	4	550	4000	5	55	USL	9 1/2 x 7 1/4 x 9 3/4	6-84	8 3/8	1129	N	63	63	63
Hertz	D-1	Deleo	Gen.	Bat.	S-Au	Deleo	312	15	1600	N	313	Bendix	11	3	450	...	4	60	Vesta	10 1/2 x 7 1/2 x 8 1/2	6-100	7	1129	...	N	63	63
Hudson	Super 6	A-Bos.	T6322	Bat.	S-Au	A-Bos.	1282	8	700	N	949	Bendix	12	4	480	4000	6	60	Presto	10 1/4 x 7 1/4 x 8	6-120	9	1129	...	63	61	61
Hupmobile	A	A-Lite	IG4117A	Bat.	S-Au	A-Lite	GJ	17	1700	5	MN	Bendix	16 1/2	4	700	3750	5	65	Willard	10 1/2 x 7 1/4 x 9 3/8	6-100	...	1129	...	N	63	63
Hupmobile	E-2	Deleo	5295	Bat.	S-Au	A-Lite	GXB	17	1400	5	MR	Bendix	16	4	800	2600	5	45	Willard	13 1/4 x 7 1/4 x 9 3/4	6-153	8 3/4	1129	N	63	63	63
Jewett	New Day	Remy	637A	Bat.	Auto	Remy	943A	13	1800	6	711E	Bendix	10	3.7	450	4500	5	70	Westin	10 3/8 x 7 x 9 3/8	6-115	8 3/8	1129	N	64	63	...
Jordan	Series A	A-Bos.	T8202	Bat.	S-Au	A-Bos.	1261	8	700	7 1/2	937	Bendix	20	3.5	500	2000	6	60	Willard	12 1/2 x 7 1/4 x 9 3							

on 1926 Passenger Cars

Battery, Headlight Lens Sizes and Lamp Bulbs

MAKE AND MODEL	IGNITION SYSTEM				GENERATOR AND STARTER							STARTING MOTOR					BATTERY				Hd. Lt. Lens	Lamp Bulbs Mazda Nos.						
	Make	Model	Current Source	Spark Control	Make	Generator				Starter		Lock Torque			No Load Bench Test		Make	Length	Width	Height		Volts and Amps. Hrs. Capacity	Outside Diameter	Head Light	Dim. if Sep. Lamp	Cowl	Tail	Instr. Board
						Model	Norm. Chg. Rate	R. P. M.	Field Fuse Amp.	Model	Engagement	Lb. Ft.	Voltage	Amps.	R. P. M.	Voltage													Amps.
McFarlan.....St. 8	Delco	5286	Bat.	S-Au	Delco	256	16	1800	...	313	Bendix	11	3	450	...	4	60	Willard	10 3/4 x 7 1/4 x 8 1/2	6-120	9 1/2	...	...	...	...	...	...
McFarlan.....TV	DeJon	IA4011	B&M	S-Au	DeJon	DE4001	16.0	1200	5	SC4001	Bendix	28.5	2.66	667	...	5	50	Willard	13x7 3/8 x 8 1/2	6-165	10 7/8	...	...	...	...	...	...
*Moon.....London	Delco	Spec.	Bat.	S-Au	Delco	258	...	...	...	181	Bendix	...	...	...	...	...	...	USL	10 3/4 x 7 1/4 x 9 3/4	6-100	9	1129	81	63	63	63	63
Moon.....Series A	Delco	5274	Bat.	S-Au	Delco	308	12	1600	N	286	Bendix	8	3	450	...	4	60	USL	9 3/8 x 7 1/4 x 9 3/4	6-84	8 3/8	1129	N	63	63	63	63	
Nash.....Advanced	Delco	5288	Bat.	H. & A.	Delco	269	16	1500	N	323	S-Gear	11	3	450	...	4	60	Gould	10 5/8 x 7 1/4 x 9 7/8	6-117	8 3/4	1129	N	63	63	63	63	
Nash.....Special	Delco	5272	Bat.	H. & A.	Delco	291	15	1600	...	323	S-Gear	16	3.0	...	...	6	50	USL	9 3/8 x 7 1/4 x 9 3/4	6-92	8	1129	N	63	63	63	63
Oakland.....6	Remy	636B	Bat.	Auto	Remy	917S	17	2500	...	713T	Bendix	12	3.6	475	5000	5	65	Willard	10 5/8 x 7 1/4 x 9 1/4	6-100	8 3/8	1129	N	63	63	63	63	
Oldsmobile.....30	Delco	5284	Bat.	Auto	Delco	327	12	1600	...	326	Bendix	12.5	3.0	...	...	6	50	Willard	9 3/8 x 7 1/4 x 9 3/8	6-80	7 3/8	1129	N	63	63	63	63
Overland.....91	A-Lite	1G4036A	Bat.	Hand	A-Lite	GP	15	1600	5	MG	Bendix	12	4	500	3400	5	45	USL	9 3/8 x 7 1/4 x 9 1/4	6-80	8 3/8	1129	N	N	61	61	61	
Overland.....93	A-Lite	IG4116B	Bat.	S-Au.	A-Lite	GP4103A	15	1600	...	MN4104	Bendix	14	3.2	550	2800	5.6	55	USL	9 3/8 x 7 1/4 x 9 1/4	6-80	8 3/8	1129	N	N	61	61	61	
Packard.....6	Delco	5249	Bat.	S-Au.	Dyneto	...	...	...	N	...	Bendix	...	...	...	...	...	...	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/8	1110	81	N	63	63	63
Packard.....8	Delco	5260	Bat.	S-Au.	Dyneto	CG	14-16	...	N	D-M	Bendix	37	3	700	3000	6	50	Presto	13 3/4 x 7 1/4 x 9 3/4	6-160	9	1158	N	N	63	63	63	
Paige.....6-72	A-Kent	LA-N3	Bat.	S-Au.	Remy	917X	12	2000	6	722A	Bendix	28	3.15	570	2500	5	70	Westin	10 5/8 x 7 x 9 3/8	6-115	8 1/2	1129	N	64	63	64	64	
Peerless.....6-72	Delco	5267	Bat.	S-Au.	Delco	284	15	1600	N	282	Bendix	11	3	450	...	4	60	Exide	10 3/4 x 7 1/4 x 9 3/8	6-100	9	1129	N	63	63	63	63	
Peerless.....6-80	A-Lite	IG4118B	Bat.	S-Au.	A-Lite	GY	15	1500	5	MN	Bendix	16 1/2	4	700	3750	5	65	USL	...	6-...	8 3/4	1129	N	...	...	...	...
Peerless.....8-69	Delco	5297	Bat.	S-Au.	Delco	258	15	1600	N	277	Bendix	11	3	450	...	4	60	Exide	10 3/4 x 7 1/4 x 9 3/8	6-135	9 1/2	1110	81	...	61	61	61	
Pierce-Arrow.....33	Delco	5265	Bat.	S-Au.	Delco	279	19	1500	N	252	Manual	...	...	...	...	...	...	Willard	13x7 3/8 x 10	6-150	9 3/4	1129	81	81	81	81	81
Pierce-Arrow.....80	Delco	Gen.	Bat.	S-Au.	Delco	300	15	1600	N	336	Manual	19	3	500	...	4	60	Willard	10 5/8 x 7 1/4 x 9 3/4	6-111	8 3/8	1129	81	81	81	81	81	
Pontiac.....Six	Remy	637C	Bat.	...	Remy	943C	13	1800	...	714C	Bendix	12	3.63	475	5000	5	65	Presto	9 3/8 x 7 x 9 3/8	6-80	8 3/8	1129	N	63	63	63	63	
Reo.....T6	N-East	{MAT 6089L6}	Bat.	Hand	N-East	{MAT 6089L6}	18	1500	6	SBR6237	R. & P.	13	...	575	...	...	...	Willard	10 3/8 x 7 1/2 x 10	6-111	9	1110	...	63	63	63	63
*Revere.....M	R-Bos.	Z4	Mag.	Hand	Westin	...	...	...	...	...	Bendix	...	...	...	...	...	...	Presto	20 3/8 x 5 x 9 3/4	6-160	8	1130	64	...	63	64	64
Revere.....25	R-Bos.	...	Mag.	Hand	R-Bos.	...	...	...	...	...	Bendix	...	...	...	...	...	...	Presto	20 3/8 x 5 x 9 3/4	6-160	8	1129	63	...	63	64	64
Rickenbacker.....E	A-Bos.	T6294	Bat.	S-Au.	A-Bos.	1066	8	850	5	966	Manual	12	4	450	3000	6	60	Willard	10 5/8 x 7 1/4 x 9 3/4	6-106	9	1110	N	63	63	63	63	
Rickenbacker.....B-8	Delco	5292	Bat.	S-Au.	A-Bos.	1066	8	850	5	957	Manual	20	3.5	500	2000	6	60	Willard	12 3/8 x 7 1/4 x 9 3/4	6-166	9	1110	N	N	63	63	63	
*Roamer.....6-54-E	Split	649	Mag.	Hand	Westin	760	...	...	...	711	Bendix	21.0	4	525	6000	5.5	45	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/8	1129	63	63	63	64	64
*Roamer.....4-75-E	Split	...	Mag.	Hand	Westin	781R	...	...	...	778	Bendix	...	...	...	...	...	...	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/8	1129	N	63	63	64	64
Roamer.....6-50-55	A-Lite	IG4034A	Bat.	Hand	A-Lite	GJ	17	1700	5	MG	Bendix	12	4	500	3400	5	45	Presto	9 3/8 x 7 1/4 x 9 3/4	6-92	7 3/4	1129	63	63	63	64	64	
Roamer.....8-88	A-Lite	IG4105	Bat.	Hand	A-Lite	GJ	17	1700	5	MN	Bendix	16 1/2	4	700	3750	5	65	Presto	10 3/4 x 7 1/4 x 9 3/4	6-112	8 3/8	1129	63	63	63	64	64	
Rolls Royce Sil. Ghost	A-Bos.	T6209	Bat.	S-Au.	Westin	571R	15	1200	1.4	778	Chain	31.0	4.0	800	...	...	...	Exide	13 3/8 x 7 3/8 x 9 3/8	6-120	10 3/8	1130	82	82	82	84	84
Star.....4	A-Lite	IG4036D	Bat.	Hand	A-Lite	GT	14	1600	5	MO	Bendix	12	4	550	4000	5	55	USL	9 3/8 x 7 1/4 x 9 1/4	6-84	7	1129	N	N	63	64	64	
Star.....Std. 6	A-Lite	IG4067A	Bat.	Hand	A-Lite	GT	14	1600	5	MO	Bendix	12	4	500	4000	5	55	USL	9 3/8 x 7 1/4 x 9 1/4	6-84	7	1129	N	N	63	64	64	
Stearns Knight.....B	DeJon	IA4004	Bat.	Hand	DeJon	DC4001	12	1500	5	SB4004	Bendix	28	4	850	3400	5	45	USL	17x7 3/8 x 9 3/4	12-84	9 3/4	1141	89	67	67	67	67	
Stearns Knight.....75	DeJon	IA4004	Bat.	Hand	DeJon	DC4001	12	1600	5	SB4004	Bendix	28	4	864	3400	5	45	USL	17x7 3/8 x 9 3/4	12-84	9 3/4	1141	89	67	67	67	67	
Stearns Knight.....95	DeJon	IA4004	Bat.	Hand	DeJon	DC4001	12	1600	5	SB4004	Bendix	28	4	864	3400	5	45	USL	17x7 3/8 x 9 3/4	12-84	9 3/4	1141	89	67	67	67	67	
Studebaker.....Sta. 6	{Remy 626L	Bat.	Auto	{Remy 917A	20	1800	...	...	...	715B	Bendix	22	2.8	575	3000	5	60	Willard	9 3/8 x 7 1/4 x 9 3/4	6-90	8 1/2	1110	N	81	63	63	63
Studebaker.....Spec. 6	{Wagner K815	Bat.	Auto	{Wag. S509	15	1500	...	...	...	S533	Bendix	60	6	575	3000	5	75	...	...	...	...	...	...	...	...	...	...
Studebaker.....Big Six	{Remy 626L	Bat.	Auto	{Remy 941L	12	2000	...	...	...	723A	Chain	70	3.25	600	1000	5	70	Willard	10 1/2 x 7 1/4 x 9 3/4	6-111	9 1/2	1110	N	81	63	63	63
Studebaker.....Big Six	{Remy 626L	Bat.	Auto	{Remy 941L	12	2000	...	...	...	723B	Chain	70	3.25	600	1000	5	70	Willard	10 1/2 x 7 1/4 x 9 3/4	6-111	9 1/2	1110	N	81	63	63	63
Stutz.....AA	Delco	5296	Bat.	S-Au.	Delco	333	12	1600	N	334	Manual	11 1/2	2 3/4	500	...	4	60	Presto	13x7 3/8 x 9 3/4	6-135	9 1/2	1110	63	N	63	63	63	
Velie.....60	Remy	637H	Bat.	Hand	Remy	941R	12	2000	...	720P	Bendix	15	3.15	570	6000	5	65	Presto	10 3/4 x 7 1/4 x 9 3/4	6-113	8 3/8	1129	...	...	63	63	63
Wills Ste. Claire T6, W6	Delco	5280	Bat.	Auto	Delco	335	16	1700	N	...	S-Gear	...	...	...	...	...	...	Willard	20x4 5/8 x 10	6-132	8	1129	N	N	63	63	63
Wills Ste. Claire B&C68	Delco	5235	Bat.	S-Au.	Delco	207	18	1600	N	+973	S-Gear	20	3.5	500	2000	6	60	Willard	20x4 5/8 x 10	6-132	8	1129	N	N	63	63	63	
Willys Knight.....66	A-Lite	IG4107	Bat.	S-Au.	A-Lite	GJA4109	16	1700	...	ML4105	Bendix	16	3.2	600	2600	5.6	50	USL	13 3/8 x 7 1/2 x 9 3/4	6-170	8 1/2	1129	N	81	63	63	63	
Willys Knight.....70	A-Lite	IG4107A	Bat.	S-Au.	A-Lite	GYA	18	1500	5	ML	Bendix	22 1/2	4	700	3000	5	50	USL	...	6-142	...	1110	...	...	...	...	...

ABBREVIATIONS

*—1925

†—Am. Bosch

A-Bos—American Bosch

A-Kent—Atwater Kent

A-Lite—Auto-Lite

Auto—Automatic

Bat—Battery

B&M—Battery & Magneto

Ec.Man—Eclipse Manual

H&A—Hand and Automatic

Mag.Sh.—Magnetic Shift

N—None

N-East—North East

Presto—Prestolite

R-Bos—Robert Bosch

R&P—Ratchet & Pawl

S-Au—Semi Automatic

S-Gear—Sliding Gear

Split—Splitdorf

Westin—Westinghouse

Prices and Weights of Current Passenger Car Models

SHIP WT. PASS. BODY STYLE. PRICE	SHIP WT. PASS. BODY STYLE. PRICE	SHIP WT. PASS. BODY STYLE. PRICE	SHIP WT. PASS. BODY STYLE. PRICE
AJAX	CHRYSLER (Continued)	ELCAR (Continued)	JEWETT
2210 5-p Touring \$865	"80"	"6-65"	"New-Day"
2410 5-p Sedan 995	3775 5-p Phaeton 2,645	..... 5-p Touring 1,295	..... 5-p Touring DeL. \$1,095
AUBURN "4-44"	3730 4-p Roadster 2,885	..... 4-p Roadster 1,495	..... 5-p Sedan 995
..... 5-p Touring \$1,145	4105 5-p Sedan 3,395	2779 5-p Coach 1,395	..... 5-p Sedan De Luxe 1,095
..... 5-p Roadster 1,145	4225 7-p Sedan 3,195	..... 3-p Coupe 1,495	
..... 5-p Coupe 1,175	4260 7-p Sedan Lim. 3,695	2900 5-p Sedan 1,595	JORDAN
..... 5-p Sedan 1,195		"8-81"	"J"
"6-66"	CLEVELAND "31"	..... 4-p Roadster 2,315	2915 4-p Playboy Road. \$1,845
2850 4-p Sport-Roadster 1,395	2415 5-p Touring \$945	..... 7-p Touring 2,265	3200 5-p Sedan 1,945
2860 6-p Touring 1,395	2565 5-p Tour'g DeLuxe 1,025	3000 3-p Coupe 2,195	..... 4-p Victoria 1,945
..... 3-p Coupe 1,445	2520 3-p Coupe 1,035	..... 4-p Coupe 2,095	Series "A"
3020 5-p Brougham 1,495	2695 5-p Sedan 1,090	4050 5-p Sedan 2,265	3340 5-p Touring 2,275
3070 5-p Sedan 1,695	2795 5-p De Luxe Sedan 1,250	..... 7-p Sedan 2,765	3625 5-p Brougham 2,575
3070 Wanderer 1,745	"43"	ESSEX	3525 5-p Sedan 2,675
"8-88"	2800 5-p Touring 1,145	2185 5-p Touring \$789*	3470 7-p Sedan 2,675
3180 4-p Sport-Roadster 1,695	2975 5-p Sp. Touring 1,295	2395 5-p Coach	KISSEL
3200 6-p Touring 1,695	2915 3-p Coupe 1,225	*Delivered, Detroit. Mfrs. do not quote F. O. B. prices.	"55"
..... 3-p Coupe 1,745	3145 5-p Sedan 1,345	FLINT	3130 2-p Speedster \$1,795
3380 5-p Brougham 1,795	CUNNINGHAM	"Z-18"	..... 2-p Sp'dster DeL. 2,085
3450 5-p Sedan 1,995	"V-6"	2497 5-p Coach 1,085	..... 4-p Sp'dster 1,895
3450 Wanderer 2,045	4500 4-p Sp. Touring \$6,150	2500 5-p DeL. Coach 1,185	3530 2-p Enc. Speedster 2,085
BUICK Standard "6"	4600 7-p Touring 6,650	"B-60"	..... 2-p Enc. Sp'd. DeL. 2,585
2845 2-p Roadster \$1,125	4700 4-p Coupe 7,600	2683 4-p Roadster 1,395	..... 4-p Enc. Sp'd. DeL. 2,685
2955 5-p Touring 1,150	5000 6-p Limousine 8,100	2708 5-p Touring 1,285	3190 4-p Tourster 2,795
3020 2-p Coupe 1,195	DAGMAR	3093 4-p Coupe Roadster 1,495	..... 4-p Tourster DeL. 1,985
3150 5-p 2 d. Sedan 1,195	"6-70"	2933 5-p Sedan 4d. 1,525	2980 5-p Phaeton 1,585
3110 4-p Coupe 1,275	3750 4-p Roadster \$3,500	3170 5-p Brougham 1,525	3170 5-p Phaeton DeL. 1,785
3230 5-p 4 d. Sedan 1,295	3800 4-p Sp. Tourer 3,500	"E-80"	..... 7-p Touring 1,685
"Master"	3700 4-p Phaeton 3,500	(120 in. W. B.)	..... 7-p Touring DeL. 1,885
3350 2-p Roadster 1,250	4200 4-p Petite Coupe 4,500	3139 4-p Sport Road. \$1,945	3430 Coupe Roadster 1,695
3515 5-p Touring 1,295	4200 4-p Petite Sedan 4,500	3189 5-p Touring 1,595	..... 4-p Coupe DeL. 2,085
3670 5-p 2 d. Sedan 1,395	4500 4-p De Luxe Coupe 4,750	3310 4-p Sp. Touring 1,945	3540 5-p Broug. Sedan 2,485
3765 5-p Sedan 1,495	4700 5-p Sedan 4,700	3414 4-p Coupe 2,045	..... 5-p Brg. Sed. DeL. 2,485
(128 in. W. B.)	4800 7-p Sedan 4,750	3529 5-p Sedan 2,195	4070 7-p Sedan De Luxe 3,085
3570 4-p Sp. Roadster 1,495	"6-60"	(130 in. W. B.)	4010 7-p Ber. Sed. DeL. 3,185
3635 5-p Sp. Touring 1,525	3150 5-p Touring 1,785	3294 7-p Touring	3530 5-p Victoria 2,185
3805 3-p Country Club 1,765	3100 2-p Roadster 1,985	3649 7-p Sedan 2,395	..... 5-p Victoria DeL. 2,485
3855 4-p Coupe 1,795	3200 4-p Sp. Touring 1,985	FORD	"75"
3940 5-p Brough. Sedan 1,925	3500 5-p Sedan 2,445	Without Starter and Dem. Rims	..... 2-p Speedster 2,195
4025 7-p Sedan 1,995	DAVIS	1526 2-p Runabout \$290	..... 2-p Speedster DeL. 2,485
CADILLAC	"92"	1557 5-p With Balloon Tires 335	..... 4-p Speedster 2,295
"314" Standard Line	2660 4-p Roadster \$1,495	1607 5-p Touring 310	..... 4-p Speedster DeL. 2,585
(132 in. W. B.)	2915 5-p Legion. Tour. 1,495	1640 5-p With Balloon Tires 355	..... 2-p Enc. Speedster 2,485
4110 5-p Brougham \$2,995	3000 5-p Sedan 1,595	With Starter and Dem. Rims	..... 2-p Enc. Sp'd. DeL. 2,985
4125 4-p Victoria 3,095	3060 5-p Imperial Sedan 1,795	1645 2-p Runabout 375	..... 4-p Enc. Speedster 2,585
4040 4-p Coupe 3,045	"93"	1655 2-p With Balloon Tires 400	..... 4-p Enc. Sp'd. DeL. 3,085
4210 5-p Sedan 3,195	2325 5-p Touring \$1,285	1728 5-p Touring 395	..... 4-p Tourster 2,195
4315 7-p Sedan 3,295	2500 5-p Sedan 1,285	1738 5-p With Balloon Tires 420	..... 4-p Tourster DeL. 2,385
4380 7-p Imperial 3,435	2450 3-p Coupe 1,285	1851 2-p Coupe 500	..... 4-p Phaeton 1,985
Custom Built	DIANA "St. 8"	1860 5-p With Balloon Tires 525	..... 5-p Phaeton DeL. 2,185
(132 in.)	2995 5-p Roadster \$1,795	1961 5-p Sedan, Tudor 520	..... 7-p Touring 2,085
4065 3-p Roadster \$3,250	3170 5-p DeL. Brougham 1,995	1972 5-p With Balloon Tires 545	..... 7-p Touring DeL. 2,085
(138 in. W. B.)	3275 5-p De Luxe Sedan 2,195	2004 5-p Sedan, Fordor 565	..... 4-p Coupe Roadster 2,485
4125 7-p Touring 3,250	3160 5-p Cabriolet 2,095	FRANKLIN	..... 4-p Coupe De Luxe 2,885
4100 5-p Phaeton 3,250	3640 7-p Sedan (135 in. W. B.) 2,695	"11"	..... 5-p Broug. Sedan 2,395
4300 5-p Coupe 4,000	3640 7-p Berline Sedan 2,895	2800 3-p Sport Road. \$2,690	..... 5-p Brg. Sed. DeL. 2,985
4400 7-p Suburban 4,150	DODGE BROTHERS	2945 5-p Touring 2,635	..... 5-p Brougham 2d. 2,095
4450 7-p Imperial 4,485	2448 2-p Roadster \$ 795	2965 3-p Coupe 2,645	..... 7-p Sedan De Luxe 3,485
CASE	2538 2-p Special Roadster 845	3175 5-p Sedan 2,790	..... 7-p Berl. Sed. DeL. 3,585
J. I. C.	2642 5-p Spec. Touring 795	..... 4-p Victoria 2,790	..... 7-p Victoria DeL. 2,885
3260 3-p Roadster \$1,840	2497 2-p Sport Roadster 845	2900 2-p Sp. Coupe 3,050	LExINGTON
3290 5-p Touring 1,885	2589 2-p Coupe 845	3080 5-p Oxford Sedan 2,865	"6-50"
3470 5-p Sp. Touring 2,160	2703 2-p Spec. Coupe "B" 895	3275 7-p Sport Sedan 2,910	2950 3-p Roadster \$1,895
3640 5-p Sedan 2,590	2811 5-p Sedan 895	3135 7-p Limousine 2,990	2950 5-p Touring 1,895
3650 5-p Brougham 2,590	2883 5-p Spec. Sed. 945	3280 5-p Cabriolet 4,400	3425 5-p Sedan 2,245
"Y"	2920 5-p DeL. Sedan 1,075	GARDNER	3425 5-p Landau Sedan 2,245
3950 7-p Touring 2,225	DUESENBERG	6B	3400 5-p Landaullet on appl.
4320 7-p Sedan 2,975	Straight "8"	3070 4-p Phaeton \$1,395	LINCOLN
CHANDLER "35"	3920 2-p Roadster	3030 4-p Roadster 1,395	4460 2-p Roadster \$4,000
3090 2-p Roadster \$1,695	3970 4-p Roadster	3290 5-p Brougham 1,545	4580 7-p Touring 4,000
3085 5-p Sport Touring 1,645	3700 5-p Phaeton \$6,650	3210 4-p Cabriolet 1,695	4780 4-p Phaeton 4,000
3223 7-p Touring 1,645	3980 4-p Sp. Phaeton	3280 5-p Imp. Sedan 1,695	4780 4-p Sport Phaeton 4,800
3498 5-p 20th C'y Sedan 1,590	4115 5-p Sedan	8B	4850 4-p Sedan 4,800
3309 5-p Brougham 1,695	4500 7-p Sedan	3350 4-p Phaeton 1,795	4780 5-p Sedan 4,900
3525 5-p Met. Sedan 1,895	DUESENBERG	3350 4-p Sp. Roadster 1,795	4890 7-p Sedan 5,100
3594 7-p Sedan 1,995	Straight "8"	3620 5-p Brougham 1,895	4945 7-p Limousine 5,300
3594 7-p Berline 2,095	3920 2-p Roadster	3620 5-p Imp. Sedan 2,095	LOCOMOBILE
CHEVROLET "X"	3970 4-p Roadster	3940 7-p Sedan 2,795	"Jr.-8"
1780 2-p Roadster \$510	3700 5-p Phaeton	GRAY	3100 2-p Roadster 2,150
1875 5-p Touring 510	4115 5-p Sedan	"S"	3000 5-p Touring 1,785
2030 2-p Utility Coupe 645	4500 7-p Sedan	2055 5-p Sedan \$845	3250 4-p Coupe 2,265
2130 5-p Coach 645	DUESENBERG	HERTZ	3400 5-p Sedan 2,285
2215 5-p Sedan 735	Straight "8"	"D-1"	3350 5-p Brougham 2,285
..... 5-p Landau Sedan 765	3920 2-p Roadster	3800 5-p Touring	"90"
CHRYSLER "58"	3970 4-p Roadster	3800 5-p Sedan	4660 4-p Sportif Tour. 5,560
2265 2-p Roadster \$890	3700 5-p Phaeton	HUDSON	4980 4-p Roadster 5,900
2300 5-p Touring 845	4115 5-p Sedan	"Super Six"	4980 4-p Coupe 6,950
2405 2-p Club Coupe 895	4500 7-p Sedan	3400 7-p Phaeton \$1,209*	5040 5-p Victoria Sedan 7,300
2510 5-p Coach 935	DURANT	3425 4-p Brougham 4d. 1,464*	..... 5-p Sed. (divided) 7,450
2570 5-p Std. Sedan 995	A-22	3640 7-p Sedan 1,695*	5000 7-p Cabriolet 7,500
2805 4-p Roadster \$1,625	2300 5-p Touring \$ 730	*Delivered, Detroit. Mfrs. do not quote F. O. B. prices.	5105 7-p Suburban 7,500
2785 5-p Phaeton 1,395	2450 4-p Spec. Touring 805	HUPMOBILE	4960 6-p Brougham 7,500
2895 5-p Coach 1,445	2480 4-p Coupe 825	"A"	"48"
3060 5-p Sedan 1,695	2650 5-p Spec. Coupe 875	2620 5-p Touring \$1,325	5280 4-p Sportif Tour. \$7,460
3035 4-p Royal Coupe 1,795	2710 5-p Spec. Sedan 995	2800 5-p Sedan 1,385	5320 7-p Touring 7,460
2995 5-p Brougham 1,865	ELCAR	..... 2-p Coupe 1,385	5640 7-p Touring Lim. 9,500
3085 5-p Royal Sedan 1,995	"4-55"	"E-2"	5630 7-p Victoria Sedan 10,040
3090 5-p Crown Sedan 2,095	2560 5-p Touring \$1,095	3255 5-p Touring 1,945	5868 7-p Brougham 10,050
	..... 4-p Roadster 1,295	3362 7-p Touring 2,045	..... 7-p Cabriolet 10,300
	2900 5-p Coach 1,195	3465 4-p Coupe 2,345	McFARLAN "6"
	..... 3-p Coupe 1,295	3500 5-p Sedan 2,345	3700 2-p Roadster \$2,650
	2779 5-p Sedan 1,395	3580 5-p Berline 2,445	..... 2-p Spec. Roadster 2,900
			3600 5-p Touring 2,650
			..... 7-p Touring 2,750

Prices and Weights of Current Passenger Car Models

SHIP WT. PASS. BODY STYLE. PRICE McFARLAN "6" (Continued)

"SV"			
3850	5-p	Brougham 4d.	\$3,180
3850	4-p	Coupe	3,180
3850	5-p	Sedan	3,180
3850	5-p	Spec. Sedan	3,180
3850	7-p	Sedan	3,280
3850	5-p	Sub. Sedan	3,380
3850	7-p	Sub. Sedan	3,480

"TV"			
4000	2-p	Roadster	\$5,400
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
5200	6-p	Sedan	6,720
5200	7-p	Sedan	6,810
5200	7-p	Spec. Sedan	6,810
5200	7-p	Enc. Sedan	7,110
5200	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000

"Straight 8"			
4000	2-p	Roadster	\$2,650
4000	4-p	Roadster	2,650
4000	5-p	Touring	2,650
4000	7-p	Touring	2,750
4000	5-p	Sedan	3,180
4000	5-p	Sub. Sedan	3,380
4000	7-p	Sedan	3,280
4000	7-p	Sub. Sedan	3,480
4000	4-p	Coupe	3,180
4000	5-p	Coach Brough.	3,180
4000	5-p	Town Car	4,600

MARMON			
"74"			
3827	4-p	Speedster	\$3,295
3827	2-p	Speedster	3,295
3827	5-p	Phaeton	3,295
3827	7-p	Touring	3,295
3827	5-p	Std. Brougham	3,295
3827	2-p	Std. Coupe	3,295
3827	4-p	Victoria	3,295
3827	5-p	Sedan	3,295
3827	7-p	Sedan	3,370
3827	5-p	Spec. Brough.	3,395
3827	5-p	Spec. Sedan	3,395
3827	7-p	Spec. Sedan	3,470
3827	5-p	Sedan De Luxe	3,775
3827	7-p	Sedan De Luxe	3,850
3827	5-p	Sedan Lim.	3,900
3827	7-p	Sedan Lim.	3,975

MOON			
Series "A"			
2600	5-p	Roadster	\$1,395
2600	5-p	Touring	1,195
2720	5-p	Cab. Roadster	1,595
2710	5-p	DeL Brougham	1,395
2860	5-p	DeL Sedan 4d.	1,545
London			
3270	5-p	Sp. Touring	\$1,985
3290	7-p	Touring	1,985
3590	5-p	Petite Sedan	2,540

NASH			
"Special"			
2870	2-p	Roadster	\$1,115
2960	5-p	Touring	1,135
3030	2-p	Business Coupe	1,165
3120	5-p	Sedan 2d.	1,215
3170	5-p	Sedan	1,315
3270	5-p	Sedan 4d.	1,445

"Advanced"			
(121 in. W. B.)			
3390	4-p	Roadster	\$1,475
3400	5-p	Touring	1,340
3550	5-p	Sedan 2d.	1,425

"Advanced"			
(127 in. W. B.)			
3480	7-p	Touring	\$1,490
3640	4-p	Victoria	1,790
3750	5-p	Coupe 4d.	1,990
3830	7-p	Sedan	2,090

OAKLAND			
"6"			
2600	4-p	Sp. Roadster	1,175
2600	5-p	Touring	1,025
2640	5-p	Coach	1,095
2615	3-p	Landau Coupe	1,125
2765	5-p	Sedan	1,195
2885	5-p	Landau Sedan	1,295

OLDSMOBILE			
"30"			
2235	5-p	Touring	\$875
2445	5-p	DeL. Roadster	975
2445	5-p	DeL. Touring	980
2460	5-p	Coupe	925
2460	5-p	Coach	950
2460	5-p	De Luxe Coupe	990
2535	5-p	De Luxe Coach	1,040
2735	5-p	Sedan	1,025
2735	5-p	De Luxe Sedan	1,115

OVERLAND			
"91" 4			
1919	5-p	Touring	\$495
2202	5-p	Std. Sedan 2d	595
2205	5-p	Sedan De Luxe	695

SHIP WT. PASS. BODY STYLE. PRICE OVERLAND (Continued)

"93" 6			
2395	5-p	Touring	\$895
2443	5-p	Std. Sedan	895
2584	5-p	Sedan De Luxe	1,095

PACKARD			
"6"			
(126 in. W. B.)			
3643	4-p	Roadster	\$2,785
3653	5-p	Touring	2,585
3595	4-p	Sp. Touring	2,750
3753	4-p	Coupe	2,585
3937	5-p	Sedan	2,585

(133 in. W. B.)			
3793	7-p	Touring	\$2,785
4043	7-p	Sedan	2,785
4133	5-p	Club Sedan	2,725
4133	7-p	Sedan Lim.	2,885

"8"			
(136 in. W. B.)			
4060	4-p	Runabout	\$3,950
4090	5-p	Touring	3,750
4023	4-p	Sp. Touring	3,900
4242	4-p	Coupe	4,650
4523	5-p	Sedan	4,750
4523	2-p	Coupe	5,775

(143 in. W. B.)			
4199	7-p	Touring	\$3,950
4555	5-p	Club Sedan	4,890
4655	7-p	Sedan	5,000
4710	7-p	Sedan Lim.	5,100

PAIGE			
"6-72"			
(125 in. W. B.)			
3827	5-p	Std. Sedan	\$1,495
3827	5-p	Sedan De Luxe	1,670
3827	4-p	Cab Roadster	2,295
3827	7-p	Sedan	1,995
3827	7-p	Limousine	2,245

(115 in. W. B.)			
3827	5-p	Brougham	\$1,295

PEERLESS			
"6-72"			
(126½ in. W. B.)			
3175	5-p	Touring	\$1,895
3425	5-p	Coupe	2,295
3500	5-p	Sedan	2,395

(133½ in. W. B.)			
3275	2-p	Roadster	\$2,195
3300	7-p	Sp. Touring	1,995
3700	7-p	Sedan	2,595
3825	7-p	Limousine	2,695
3575	5-p	De Luxe Sedan	2,795
3650	7-p	De Luxe Sedan	2,995

"6-80"			
2800	5-p	Phaeton	\$1,395
2800	5-p	Roadster	1,495
2950	5-p	Sedan	1,495
3140	5-p	Std. Sedan	1,595
3140	5-p	De Luxe Sedan	1,795

"6-69"			
3675	.....	Roadster	\$2,995
3950	5-p	Sedan	3,495
4025	7-p	Sedan	3,595
4100	7-p	Ber. Limousine	3,795

PIERCE-ARROW			
"80"			
3205	2-p	Runabout	\$2,895
3260	4-p	Phaeton	3,095
3385	7-p	Phaeton	2,895
3430	5-p	Coach 2d.	3,150
.....	5-p	Coach 4d.	3,250
.....	7-p	Coach	3,350
3335	4-p	Lim-Coach	3,450
3365	4-p	Coupe	3,695
3440	5-p	Coupe Landau	3,820
3560	7-p	Sedan	3,895
3615	7-p	Enc. Dr. Lim.	4,045

"33"			
4350	2-p	Runabout	\$5,250
4500	4-p	Touring	5,250
4590	7-p	Touring	5,250
4730	3-p	Coupe	6,800
4800	4-p	Sedan	6,900
4750	7-p	Sedan	7,000
4730	4-p	Coupe Sedan	6,900
4850	7-p	Brougham	6,800
5060	7-p	Limousine	7,000
4780	7-p	French Lim.	7,000
4730	6-p	Landaulet	7,000

PONTIAC			
2270	2-p	Coupe	\$825
2335	5-p	Coach	825

REO			
"T-6"			
3375	2-p	Roadster	\$1,635
3182	5-p	Sp. Touring	1,395
3365	2-p	Coupe	1,495
3365	2-p	Spec. Coupe	1,565
3515	5-p	Sedan 4d.	1,565
3565	5-p	Spec. Sedan	1,745

SHIP WT. PASS. BODY STYLE. PRICE REVERE

"25"			
3900	2-p	Sp. Roadster	\$2,750
3975	4-p	Speedster	2,750
4050	5-p	Touring	2,750
4300	5-p	Sedan	3,800

"M"			
3700	2-p	Roadster	\$3,200
3800	4-p	Sportster	3,200
3970	5-p	Touring	3,200
4400	5-p	Sedan	4,000

RICKENBACKER			
"E"			
3038	5-p	Touring	\$1,750
3068	7-p	Touring	1,795
2953	4-p	Roadster	1,795
3116	5-p	Coupe-Sedan	1,695
3202	5-p	Brougham	1,895
3092	4-p	Coupe Roadster	1,920
3040	4-p	Coupe De Luxe	1,995
3317	5-p	Sedan	2,095
3353	7-p	Sedan	2,195

"B-8"			
3227	4-p	Roadster	\$2,195
3315	5-p	Touring	2,150
3355	7-p	Touring	2,195
.....	4-p	Sup. Sp. Roadster	3,250
3445	5-p	Coupe Sedan	2,095
3486	5-p	Brougham	2,295
3345	4-p	Coupe Roadster	2,320
3440	4-p	Coupe DeLuxe	2,395
3603	5-p	Sedan	2,495
3640	7-p	Sedan	2,595
.....	4-p	Sup. Sp. Sedan	5,000

ROAMER			
"6-50-55"			
.....	5-p	Spec. Tourer	\$1,295
.....	5-p	Spec. Sp. Tourer	1,395
.....	2-p	Bus. Coupe	1,395
.....	5-p	Coupe	1,395
.....	5-p	Sedan DeLuxe	1,695

"6-54-E"			
.....	4-p	Roadster	\$2,385
.....	4-p	Tourer	1,935
.....	4-p	Sport	2,285
.....	7-p	Tourer	2,285
.....	3-p	Cabriolet	2,750
.....	5-p	Sedan	2,950

"4-75-E"			
"Custom Built"			
.....	2-p	Speedster	\$3,485
.....	3-p	Sport	3,285
.....	4-p	Tourer	2,985

"8-88" (138 in. W. B.)			
.....	4-p	Roadster	\$2,750
.....	5-p	Sport	2,750
.....	5-p	Tourer	2,495
.....	7-p	Tourer	2,585
.....	2-p	Speedster	2,985
.....	5-p	Sedan	1,995
.....	3-p	Cabriolet	2,9

This list comprises cars distributed on a national basis

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Motor Age

Motor Age

Motor Age



They want Lockheeds on their next car

A recent questionnaire reveals that more than twice as many owners of cars equipped with two-wheel brakes, favor Lockheed Hydraulic Four-Wheel Brakes, as against all the various kinds of mechanical four-wheel brakes. That preference is increasing steadily, as each succeeding day adds new hundreds to the thousands of Lockheed enthusiasts. Every time a man or woman has occasion to drive

a Lockheed-equipped car, Lockheed Hydraulics win another enthusiastic supporter who is strongly inclined to select his or her next car from among those equipped with Lockheed Hydraulic Four-Wheel Brakes. You will find Lockheed Hydraulics on fully one-half of all chassis models made in America, and on sound-value cars ranging from well under a thousand dollars to the most expensive.

HYDRAULIC BRAKE COMPANY, DETROIT, U. S. A.

The Answer
LOCKHEED HYDRAULIC
Four BRAKES Wheel

MAKE AND MODEL			ENGINE										ELECTRICAL SYSTEM		REAR AXLE			BRAKES		STEERING GEAR—Make		CHASSIS LUBRICATION—Type and Make		ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS								
Wheel Base ^a (Inches)	Tire Size	Decimals-Balloons	Make and Model	Number of Cyls.	Rated H.P.	Piston Displacement	Valve Arrangement	Camshaft Drive	Piston Material	Damper ^b V-b	Oiling System	Cooling System	Thermosist ^c	Radiator ^d	Shutters ^e	Carburetor	Air Cleaner ^f	Ignition System	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	4 Wheel (Optional)	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make	Abbreviations—Names of Mfrs. of Stock Parts	
74	34x7 30	136	Marmon	4	33.8	340	I	He.	3	P F	Y	Pu.	N	N	Sch...	N	Delco	N	Delco	D. Own.	Own.	m-Spl.	%	Own.	Var.	E-R	L-R	M*	Own.	O-45.	Bowen	A-K—Atwater Kent
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
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74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
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74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
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74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.	m	1/2	Tim.	4.27	E-F	E-T	H	Rosa.	S-581 1/2	Own.	Al—Alameda
74	33x6 20	137	McFarlan	4	27.3	288	I	Ch. C.I.	3	P F	Pu.	Pu.	N	N	Ray...	N	Delco	N	Delco	P. B&B.	W-G.</											

KEY TO SYMBOLS
 —At extra cost
 —Balloons at extra cost
 —Semi-floating
 —Three-quarter floating
 —Air
 —Al—Aluminum
 —B—Semi-steel
 —B-B—Both internal and external four wheels
 —BQ—Bowl Gear Overhead drive

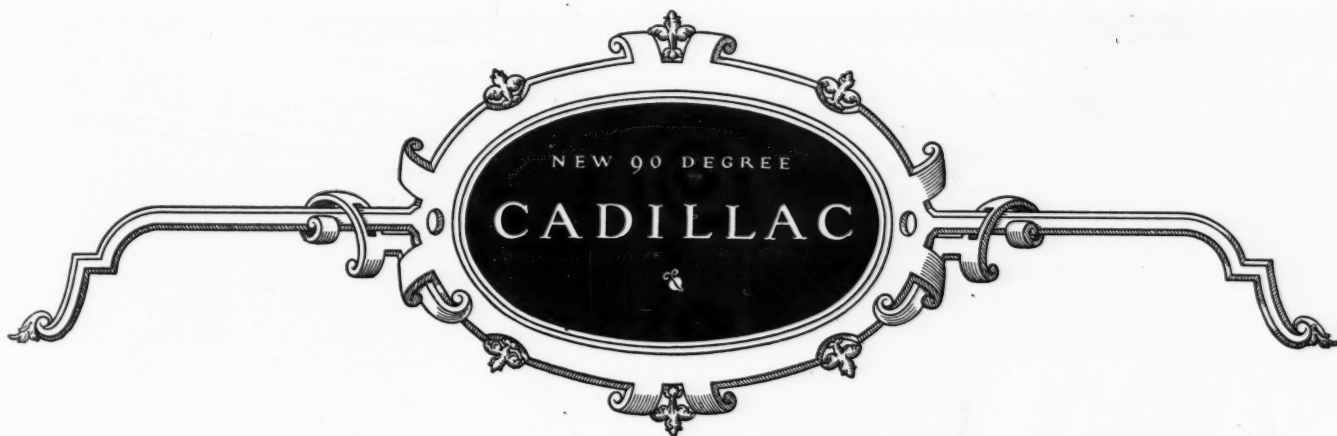
CI—Cast iron
 CO—Chain; Overhead shaft
 CU—Oil and grease cups
 D—Multiple disk
 E—Full elliptic
 E-F—Internal four wheels
 E-F—External rear wheels
 E-T—External transmission
 F—Fabric
 F-F—Full floating
 G—Head and side
 GR—Grease cups
 H—Horizontal (valves)
 H—Hydraulic (brakes)
 H-H—Helical gear
 I—Internal
 I-F—Internal four wheels
 I-R—Internal rear wheels
 I-T—Three-quarter elliptic

L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
OC—Oil cups
OG—Oil and Grease Cups
OW—Oil cups with wick feed

PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter
Re—Rectifier

Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve

War—Warner
Wat—Watford
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith

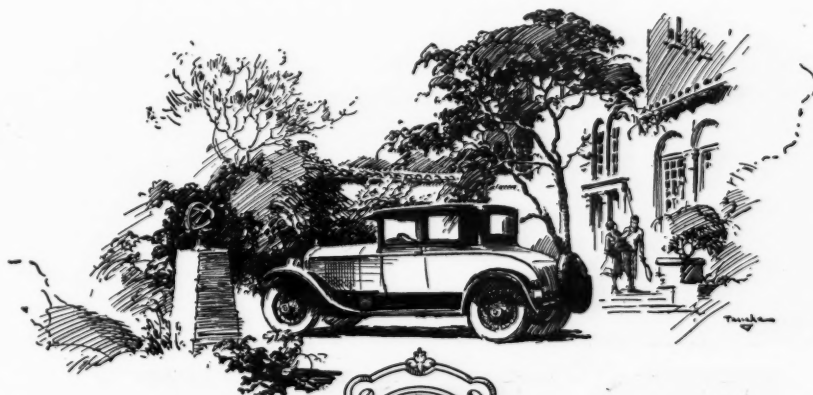


A Flood Tide of Demand

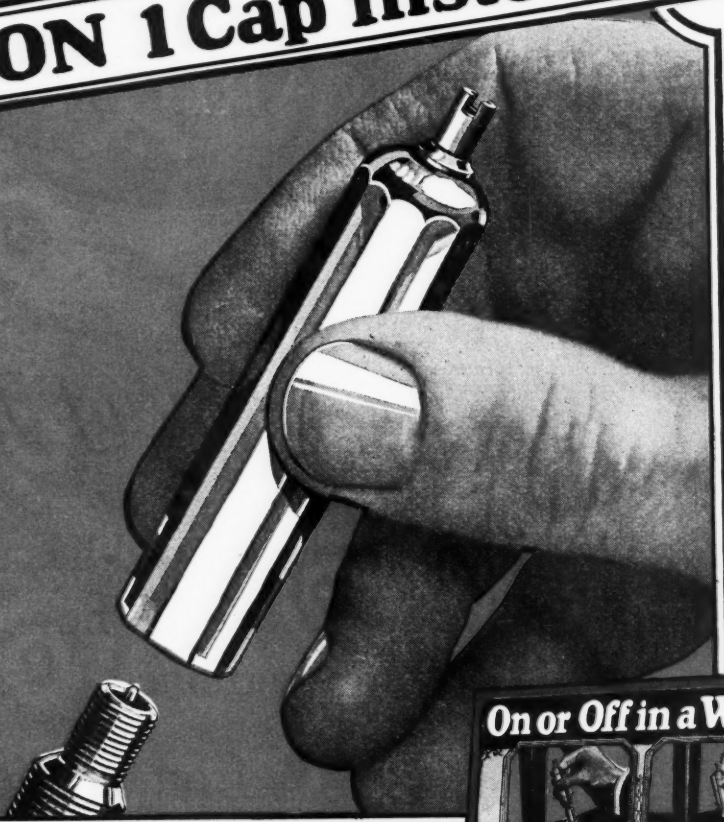
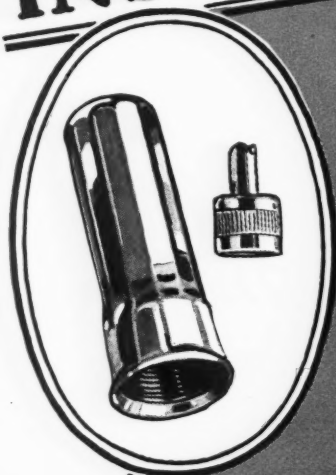
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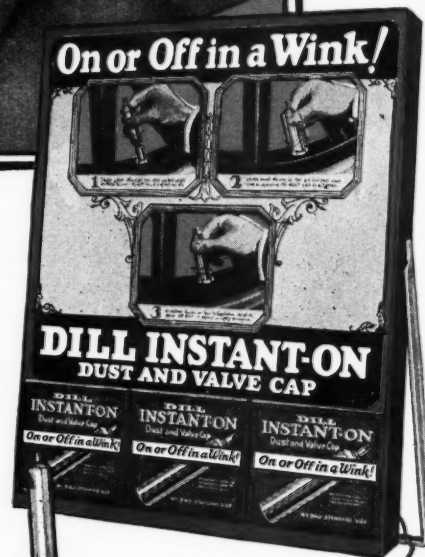
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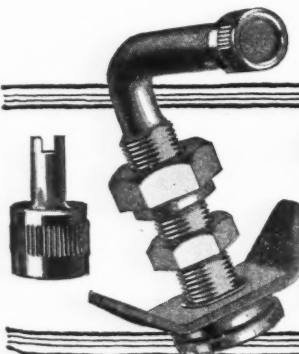
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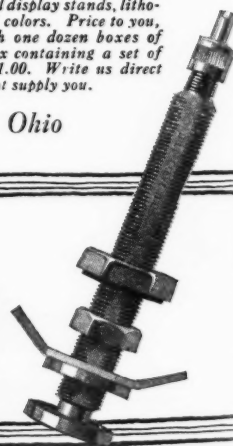
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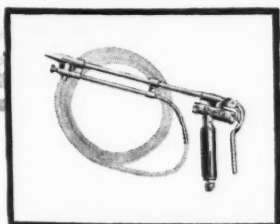
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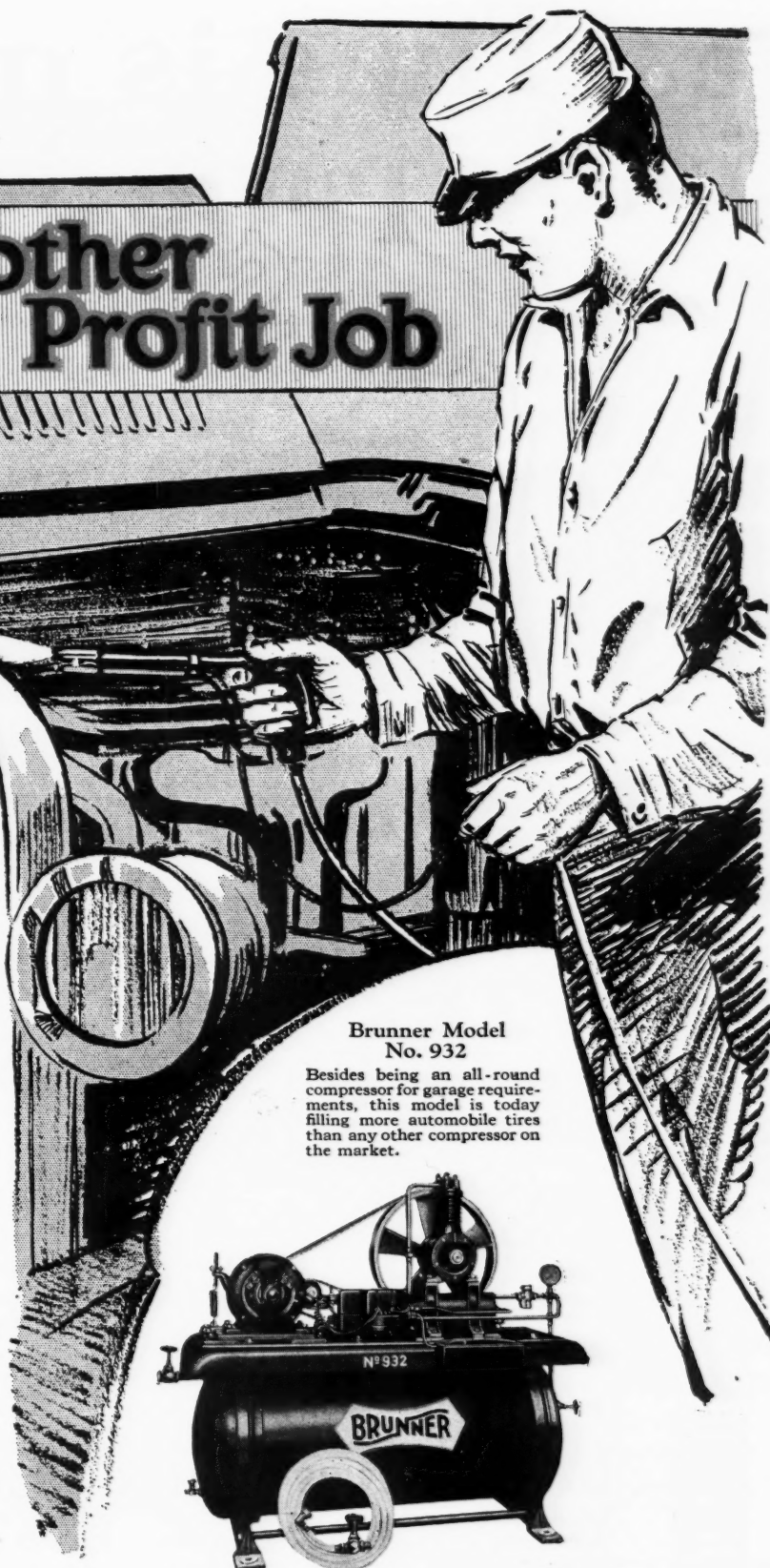
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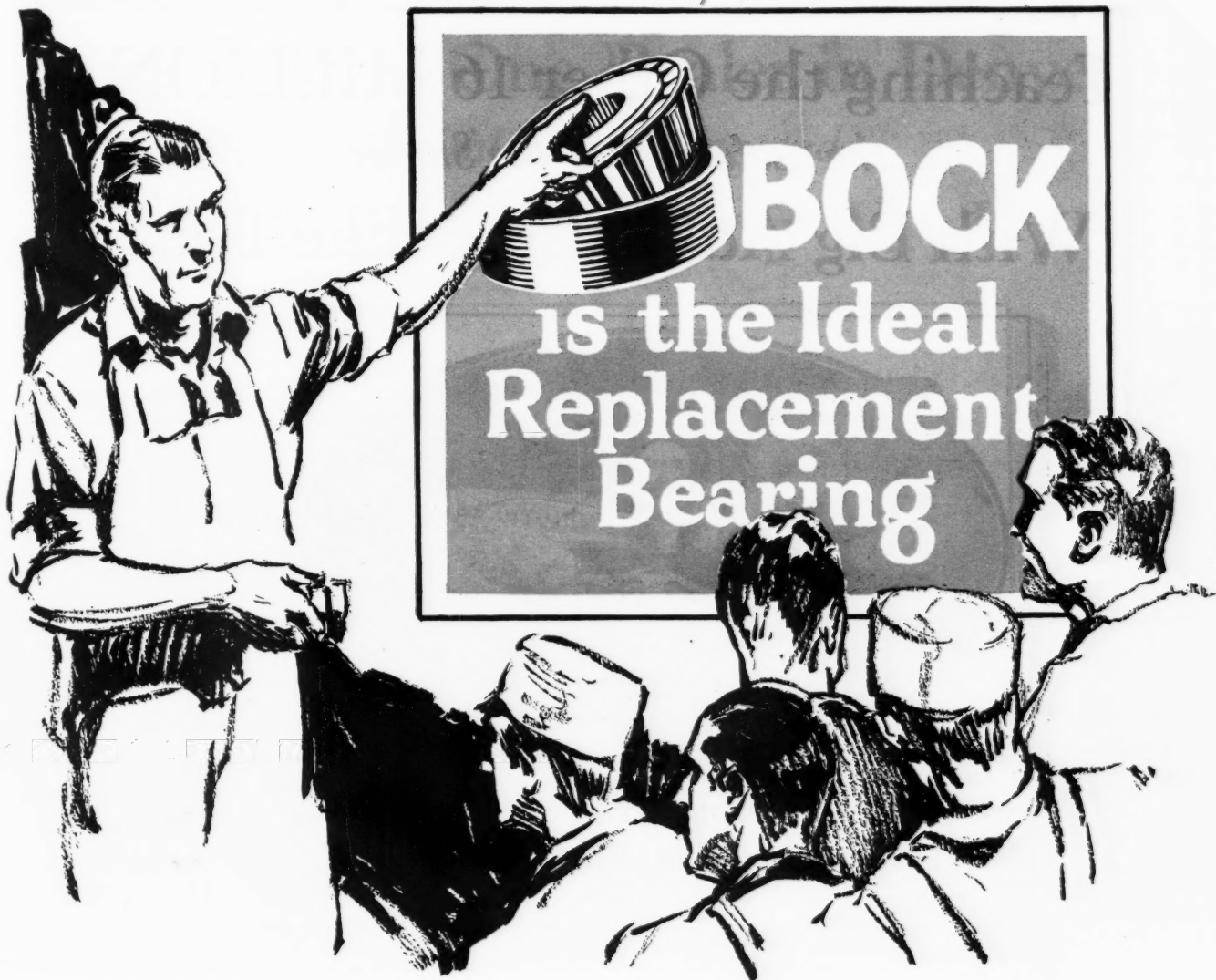
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"They're completely interchangeable, make a perfect replacement, and the discounts are RIGHT. This shop is going to use Bocks."

Distributors throughout the country

THE BOCK BEARING COMPANY, Toledo, Ohio

Mail this coupon for full details of our exclusive proposition.

The Bock Bearing Company
Toledo, Ohio

Send details of your exclusive proposition for distributors.

Name.....

Address.....

Town.....

State.....

B O C K
TAPER ROLLER BEARINGS

Teaching the Other 16 MILLION *the usefulness of the Shaler* With Big Advertising Like This



A Friend In Need On Any Trail—

Millions of motorists who tour the trails and highways of the world put their faith in the useful little Shaler 5-Minute Vulcanizer. They have learned from experience that you never can tell when you're likely to pick up a tack, or nail or run over the jagged end of a broken bottle. They have learned from experience, too, that vulcanizing with the Shaler outfit is the quickest and easiest way to fix punctures anywhere on the road.

Why Vulcanizing is Quicker, Easier, Surer

A special Patch-&-Heat Unit for each repair is the secret. It is a little tin pan with a piece of raw rubber on the bottom and containing a disc of prepared solid fuel that gives just the right amount of heat to vulcanize the patch to the tube.

To make a repair you simply clamp one of these units over the puncture, light the fuel, give it five minutes to cool, then unscrew the clamp and throw the pan away. That's all. The repaired tube is ready to use. It's vulcanized to last.

Get one of these handy little Shaler 5-Minute Vulcanizers today. Carry it in your car—always. When the emergency comes—no matter where you are—you will find that you can clamp on a Shaler Patch-&-Heat Unit, touch a match to it—and then take a walk and stretch out your legs—all in less time than you could cut a patch to fit, put on cement and wait for it to dry, and stick on the patch (to say nothing of getting the cement off your fingers).

It's no wonder that 50 MILLION Shaler Patch-&-Heat Units were used last year by motorists.

Get this "Hole" Outfit today for only \$1.50 wherever auto supplies are sold. Slightly higher in Canada and for West. Includes vulcanizer and 12 Patch-and-Heat Units—ready to use.

Descriptive Circular Mailed Free on Request

C. A. SHALER CO., Waupun, Wis., U. S. A.
World's Headquarters for Tire Repair Equipment

Branch Factories:
Beeston, England and Montreal, Canada



Watch for these full pages—Saturday Evening Post, May 15; Liberty, May 22. Lots more coming.

Only four million motorists have Shaler Vulcanizers. The big advertising right now is teaching the other sixteen million the usefulness of the Shaler. Many of them are ready to buy. Show 'em and sell 'em. It means steady repeat business for you on the sale of Shaler Patch-&-Heat Units—50 million of which were used last year alone.

C. A. SHALER CO. / MAIN OFFICE AND FACTORY / WAUPUN, WIS.

Here's How One Dealer in Denver *uses this advertising and* Makes His Sales Jump Way Up

ARAPAHOE AUTO EXCHANGE

1841-45 Arapahoe Avenue
DENVER, COLO.

C.A. Shaler Co..
Waupun, Wis.

Gentlemen:

We wish to thank you very much for all the circulars and good advertising display material you mailed us, and we wish to state right now that we surely are making good use of them.

Just now we are planning special window displays to tie up with your Saturday Evening Post advertisements, because last year we found that every time we featured your article in our window the weeks your ads appeared in the Post our sale of both vulcanizers and patches jumped way up.

We believe your vulcanizing outfit to be the best patching article on the market today and recommend same as such to all our customers. We even go further than this. Our salesmen have permission to absolutely guarantee this article.

We are rated as pioneers in the auto accessory line here in Denver and sell a great many of your Shaler Vulcanizers and patches, as your company well knows

Very truly yours,

ARAPAHOE AUTO EXCHANGE

The dealer who takes advantage of Shaler's big advertising is the one who makes the most sales. The letter above proves it. Now is the time to get the Free colorful Shaler display material for your window, too. It's the best way we can suggest to get the full benefit of this advertising. Send for this selling help today. We'll see that you get it quickly.

WORLD'S HEADQUARTERS FOR TIRE REPAIR EQUIPMENT



Moulded Rubber and Cord Make the World's Finest Fan Belt !

HOLD a Gilmer Moulded Rubber Cord Type Fan Belt in your hands—then give the door jamb a couple of whacks with it... what's the word that comes to your mind?... TOUGH!

Tough is right! That belt will take all the gaff a car can give it. But, more than tough—it has amazing strength and endurance, because of its new-spun, high-tension cord body—and it is just the right degree of pliability, because of the freshness, purity and high quality of the rubber used in the mould.



Van Says:

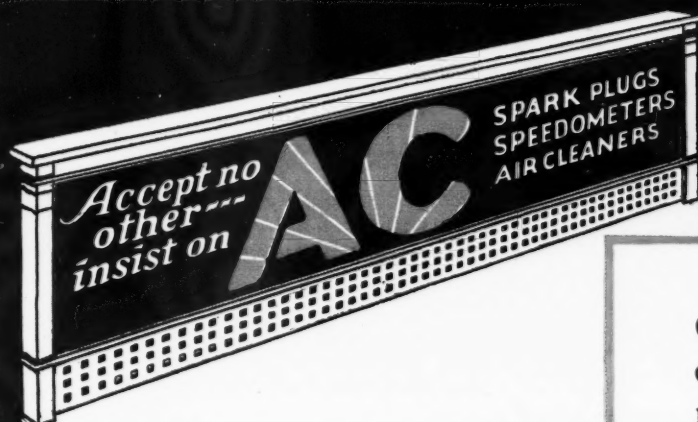
"Gilmer is a good name to tie up to!"

Yes sir, here's a product you not only can "talk up" to your customers, but one you can BRAG about! You won't hesitate to recommend them because you'll know they'll *make good*. Ask your jobber to show you one of the attractive Gilmer Fan Belt packages and explain our free counter display cabinet proposition.

L. H. GILMER CO., Tacony, Phila., Pa.

Gilmer

Makers of the World's Best Known Fan Belts



One hundred and forty-eight different automotive manufacturers seeking reliable and economical operation rely on AC products.

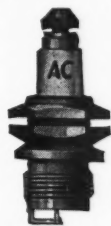
That is the reason for AC's assured market and why they are sold without sales resistance by dealers everywhere.

They are backed by strong advertising and carry a good margin of profit.

AC Spark Plug Company
FLINT, Michigan

Makers of
AC-SPHINX AC Spark Plugs
Birmingham AC Speedometers
ENGLAND AC Air Cleaners
AC-OLEO
Levallois-Perret
FRANCE

AC
SPARK PLUGS



THE new AC Spark Plug marks the greatest advance made in spark plug construction in years.

A new design, a new alloy for sparking points, a new electrically fused Kyanite insulator core and a new glaze—in a type and size for every motor.

For Fords there is the famous AC 1075, embodying the above improvements as well as many other special features—and it is now made in both one- and two-piece design.

AC
SPEEDOMETERS

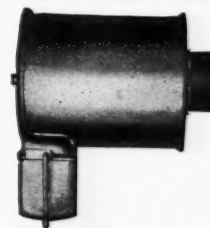


THE AC Speedometer for Fords is of the same high quality as furnished for original factory equipment to the manufacturers of Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Hertz, Oakland, Oldsmobile, Peerless, Pontiac, and GMC trucks.

There is no swivel joint between the front wheel and the instrument—it drives direct—exclusively an AC feature, insuring continuously satisfactory service.

Packed complete with all installation attachments, easily mounted and reasonably priced.

AC
AIR CLEANERS



THE AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor, thereby eliminating excessive wear on the motor's moving parts. Original factory equipment on Buick, Davis, Hertz, Locomobile "Jr. 8," Oakland, Nash, Stutz, Willys-Knight "6" and Yellow Cab—models available for installation on Chevrolet, Chrysler 4, Dodge Brothers, Ford, Maxwell, Oldsmobile, Star, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.

Packed complete with all installation attachments, easily mounted and reasonably priced.

CASH IN ON THIS

A special campaign is reaching 20,000,000 readers through a list of publications headed by such great national mediums as *The Saturday Evening Post*, *Collier's*, and *Liberty*.

This advertisement appears in *Liberty* May 8th, *The Saturday Evening Post* May 22nd, and *Collier's* June 5th.

37% to 50% Reduction

on List Prices to Car Owners

THE NEW THERMOID LIST brings welcome news to the motorist, because it reduces the car owner's list price of Thermoid Hydraulic Compressed—the All-Weather Brake Lining—by 37%, and it reduces the car owner's list price on Thermoid Interwoven Brake Lining by 50%. It enables the Thermoid Service Station or Garage to give the motorist an unquestionably superior lining at a much lower cost than the list price of even the most inferior lining.

The reduced list to the car owner does not indicate any reduction in quality. On the contrary Thermoid Hydraulic Compressed Brake Lining with its new all-weather feature is a distinct improvement. And Thermoid Interwoven Brake Lining, on which there is a 50 per cent reduction in list price to the consumer, remains a recognized standard among woven linings.

Improved production methods and increased volume are responsible for the change.

The New All-Weather Brake Lining

A new and exclusive weave now employed in Thermoid Hydraulic Compressed Lining insures the easiest, quickest and most dependable brake action in any and all weathers. Thermoid's gripping power is greater even on a wet day than that shown by some linings in the driest weather. The greatest swelling or shrinkage of Thermoid under changing weather conditions is measured by thousandths of an inch.

Your Saving

on the new list prices to consumers depends on the car you drive. For example:

DODGE
BUICK
(4-wheel brakes)
PACKARD
(4-wheel brakes)

Old List Price to Car Owners on all Brake Linings	\$6.50
New List Price on Thermoid Hydraulic Compressed Lining	4.10
New List Price on Thermoid Interwoven Lining	3.25
Old List Price to Car Owners on all Brake Linings	\$11.55
New List Price on Thermoid Hydraulic Compressed Lining	7.31
New List Price on Thermoid Interwoven Lining	5.77
Old List Price to Car Owners on all Brake Linings	\$15.90
New List Price on Thermoid Hydraulic Compressed Lining	10.07
New List Price on Thermoid Interwoven Lining	7.99

THERMOID RUBBER COMPANY
Factories and Main Offices, TRENTON, N. J.
Makers of Thermoid and Rapid Transmission Lining, Thermoid-Hardy Universal Joints, Thermoid Radiator Hose and Mechanical Rubber Goods

Thermoid

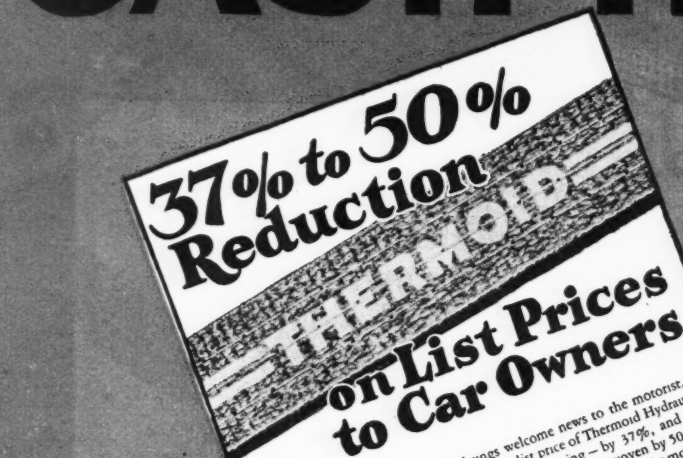
Hydraulic Compressed
Brake Lining

The All-Weather
Brake Lining

"For Short Stops
and Long Service"

Thermoid

The All-Weather Brake Lining



The logo is a dark, stylized banner with a pointed right end. Inside the banner, the word "Thermoid" is written in a large, outlined, serif font. Below it, the words "Brake Lining" and "Service" are written in a smaller, plain, sans-serif font, stacked vertically.

Thermoid
Brake Lining
Service

Better Linings at Better Prices

THINK what that means to the garage man who uses Thermoid. He can now offer his customers Thermoid *Hydraulic Compressed Brake Lining*, with its new all-weather feature, at *37 per cent* less than the list price of the most inferior lining. He can offer Thermoid *Interwoven Brake Lining*, the recognized standard among woven linings, at *50 per cent* less than the usual list.

When the garage man can supply these two leaders in the field at a lower list price to the car owner—he is bound to attract more business and plenty of it.

Under the new Thermoid lists he makes a neat profit and he can still charge the market price for high grade workmanship. He is protected against the competition of the one-horse shop that installs a cheap lining at a quality price or at cut rates. Our national advertising, featuring the new Thermoid lists, is bringing thousands of new customers to Thermoid Service Stations and Garages.

Make your shop a Thermoid Service Station and stamp it as a "Quality and Fair Price" Shop.

Now is the time to cash in on Thermoid.

THERMOID RUBBER COMPANY

Factories and Main Offices

TRENTON, N. J.

Makers of Thermoid and Rexoid Transmission Lining, Thermoid-Hardy Universal Joints, Thermoid Radiator Hose and Mechanical Rubber Goods

Hydraulic Compressed
Brake Lining
"For short stops and long service"

Today the Garage Man Makes Money by SELLING

Not by
Crawling
Under
Cars



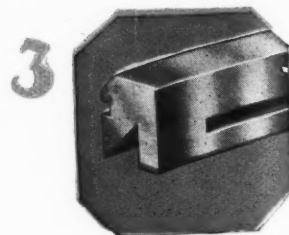
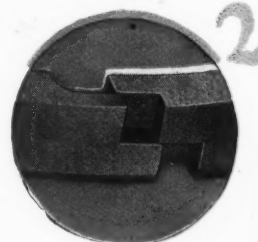
TWENTY MINUTES with this little booklet will show you the knack of selling piston rings. Everybody's reading it. Send for yours. It's free.

Three minutes spent talking the Gill Combination of piston rings makes you a profit of \$3.20.

But if you install 18 ordinary rings, you make only \$1.80. Is there an easier way to make this extra profit in three minutes.

You are the doctor, remember, and your customer will take your word for what is best for his motor and you can take ours that the Gill Combination is best and this little selling proposition **works**.

Would you like to have the Gill Wall-Chart of Piston-Ring Sizes? Invaluable to you. Send your name. THE GILL MANUFACTURING CO., 8300 South Chicago Ave., CHICAGO, ILL.



The Economy Oil Ring

The **Gill**
Combination

Positive Action

Here's an air stand you can depend on—it's automatic! Won't vary more than one pound from its setting. Its action is positive and faultless.

The American Automatic AIR STAND

Now you can have an air stand which is absolutely *automatic* and *positive* in measuring the inflation of tires.

Set the American Automatic Air Stand for the pressure desired and it *faithfully delivers* that amount, to within a one pound variation, into the tire!

Think what this means to your customer and you. Remember that the air stand is the one piece of equipment in your station that the motorist usually *handles himself*—and, a *dependable, automatic* air stand reflects credit on your station and service. Further, no more will you *lose gauges*—nor time and attention in *giving* them out and *getting* them back.

The American Automatic Air Stand operates on a *diaphragm-switch* principle—not by pressure regulating valve or electrical mechanism. Has no complicated construction—it is easy to operate. It has been "station-tested" and proven worthy.

While air is flowing into tire the *bell rings*—it *stops ringing* when pressure is reached and the air is *instantly* and *positively* shut off, even though the chuck is held on the tire.

Write today for details on this new automatic air stand—use the coupon.

**The American Oil Pump
& Tank Company**

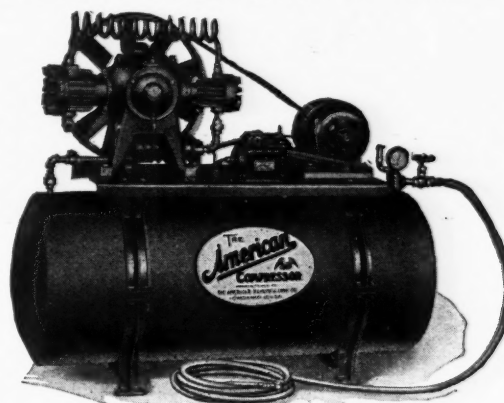
1159 Findlay St. Cincinnati, O.



THE American AIR COMPRESSOR

For construction, operation, wear and appearance this American Air Compressor stands supreme. Noiseless operation secured by using plate or disc valves—no hammering. Cylinders are offset from center to crank-case—connecting rods kept straight. Made in three sizes: $\frac{3}{4}$ H. P., 30 gallon tank, 3 cu. ft. per minute delivery; $\frac{3}{4}$ H. P., 60 gallon tank, 3 cu. ft. per minute delivery; 1 H. P., 60 gallon tank, 4.5 cu. ft. per minute delivery.

Coupon below will give you full information.



THE AMERICAN OIL PUMP & TANK CO.,
1159 Findlay Street, Cincinnati, Ohio

Please send information and prices on:

☐ Automatic Air Stand

☐ Air Compressor



On May 22, Our Promise to over 2,000,000 Motorists: Warns Without Startling —make money proving it!

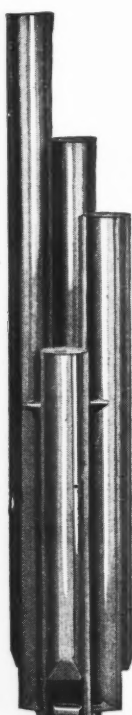
THERE'S a big story for you in our next half-page Saturday Evening Post advertisement for May 22, reproduced on the opposite page. Profit from it. Nerve-shattering warnings occur every day before your store and on every street and highway near you—pedestrian and motorist are confused by harsh, sudden signalling. Do you wonder that our promise "Warns Without Startling" will create tremendous interest!

Turn this Interest into Profits

Over 2,000,000 motorists will see this promise. Many of them are customers of yours. They will want to hear the melodious, *different* AERMORE tone—listen to its possibilities as a gentle-voiced traffic warning or a rich-toned, powerful highway signal that carries a remarkable distance—just as you would if you were buying. Make money proving our promise for the Fulton AERMORE Horn. Our free counter demonstrator makes it easy. Simply attach an AERMORE from stock and it is ready to work for you. Pressure on the air plunger imitates the results on a car.

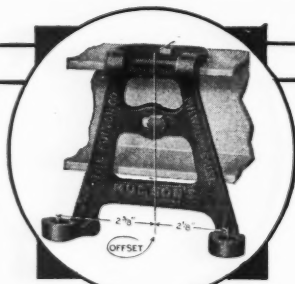
Five Sizes. Retail Prices, complete with Valve and Handy Dash Control

Ford Special, 13 in. length.....	\$ 7	No. 0 —17 in. length, for medium cars....	\$12
No. 1—15 in. length, for small cars....	10	No. 00—22 in. length, for large cars.....	14
No. 000 Extra deep tone Motor Bus Special.....			\$16



Nearly 3000 Dealers

—are using this Fulton AERMORE demonstrator and getting sales increases. Never before has the "Signal with a Smile" been so profitable to handle. Demonstrator is supplied without cost in return for a nominal order. Ask your jobber how to get one.



Hudson's Model B Crank Case Repair Arm—fits either side of any Ford crank case without drilling, filing, or forcing. Holds motor in original alignment. Quickly and easily installed. Better satisfied customers—more sales. \$1.50 each.

THE FULTON COMPANY, 732-75th Ave., MILWAUKEE, WIS.

FUL

"SOUND YOUR HORN SANELY"



Warns Without Startling

FULTON AERMORE

Exhaust Horn
The Signal With a Smile

THE rich agreeable signal of the startles—confuses—nor antagonizes. Because of remarkable flexibility in volume and tone you may sound in a civil request—a courtesy signal—or an emergency warning—precisely in the tone desired.

No car is fully equipped for country driving without an Aermore Horn. It opens the road—courteously—safely. Carries long distances—indispensable around blind curves and winding trails.

Realize your own ideals of good manners in driving by equipping your car with a Fulton Aermore Horn. It is distinctively different.

See your dealer or write us giving make of your car.

Price complete with Valve and Hand Control
No. 000 Extradepression Motor (Blue Special) \$16.
No. 01 22 in. length, for large cars 14
No. 02 17 in. length, for medium cars 12
No. 03 15 in. length, for small cars 10
Ford Special, 17 in. length, 10

Fulton-Perfection Pedal Pads

They cushion your pedals with soft, live rubber, firmly encased in nickle-plated frames. Keep your feet safely on the pedals—adds safety to driving. For all makes of cars, \$1.00 per set.

Type 7, illustrated above, for Buick, Chevrolet, Chrysler, Dodge, Oldsmobile, Packard, Studebaker.

THE FULTON COMPANY Milwaukee Wisconsin

Ford Owners
Here is the combination that adds greatly to comfort, safety and convenience when driving.

Fulton-Perfection Pedal Pads
for brake, clutch and reverse pedals. Keep your feet from sliding off the pedals. Adaptable to most automobiles. Type D-26, Per set of 3, \$1.

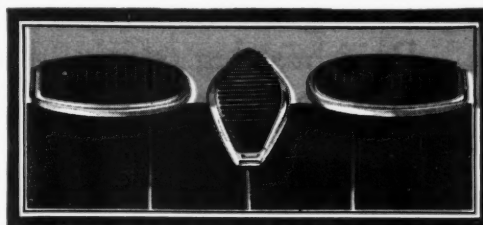
New Improved Fulton Accelerator
Smooth action. Simple to attach and operate. Nickel rubber covered pedal. The SAFE installation—5 inches away from brake pedal. Fits all model Fords. Complete set of 3, \$1.



New, Improved Fulton Accelerator

Never, we believe, has any accessory won such instant popularity and domination as the new improved Fulton accelerator. Right in principle, right in design, right in appearance, right in price—and the way it is shattering past sales records proves it.

Big, handsome foot piece is actual Fulton (Perfection) Pedal pad—live, black rubber mounted in nickel frame. Absorbs vibration. Fits the foot. Big car equipment at a \$1 price. Packed in attractive, individual carton with simple directions. Direct action to carburetor. Smooth working—positive pedal-return the instant foot pressure is removed. Counter demonstrator, fully equipped, supplied free with reasonable order. Ask your jobber.



Fulton Perfection Pedal Pads

For safety and comfort, these neat, practical pedal pads appeal to every Ford owner. Thick, lively rubber, firmly encased in nickel frame. Attached in a jiffy. A big seller.

For Fords—type D-26 (fit 1926 models) set of 3, \$1.00. Type DX (for Fords previous to 1926, set of 3, \$1.00). For other cars, set of 2, \$1.00.

THE FULTON COMPANY, 732 75th Ave., MILWAUKEE, WIS.

FULTON



Fulton Copperhead Socket Wrench
No. 4100
PRICE, \$3.50

An indispensable tool for garages, tire shops, service stations. The 4 sockets take all ordinary size rim nuts. Leverage can be instantly increased 300%, simply by throwing over the handle. High-carbon steel socket head turns easily. Socket head is copper plated.



Blackhawk Rest-A-Foot Throttle

Motorists Want It

EVERY car owner wants the Blackhawk Rest-A-Foot Throttle as quickly as he sees it.

A complete accelerator and automatic foot-rest in one unit, it combines comfort with even gas feed and prevents jerking, jolting and lurching over rough roads. Banishes leg strain and foot cramp. Weight of foot on rest holds gas button steady at all speeds. Easily and quickly installed. Lasts a lifetime. Order today. Display Stand FREE with first order for 11 throttles (one mounted). Retail price \$3.00 for Fords.

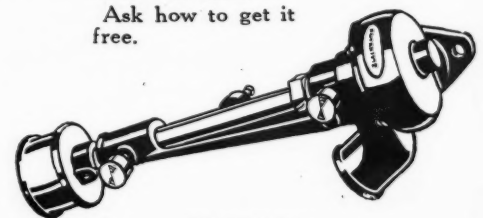
BLACKHAWK MFG. CO.

Dept. S, Milwaukee, Wis.



Socket wrench sets for all cars are easily made up and sold from this cabinet.

Ask how to get it free.

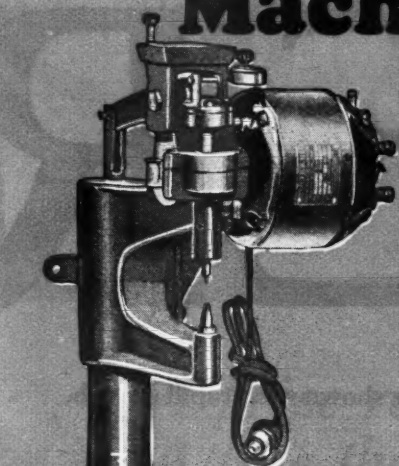


The "Chief"

Water pumps for Fords. The Blackhawk "Chief" and "Scout" represent the most efficient pumps ever made for Fords. Fast sellers. Write for catalog and prices.

BLACKHAWK

More Multibestos Machines—



—were bought in the past year, they tell us, by service stations, repair shops, and equipment dealers than any other type of Brake Relining Machine on the market. This proves how completely this machine, with its *three-fold operation*—fills the needs of the trade. Priced within the means of every garage, it

1. Punches out the old rivets in lining and band—
2. Drills and counter-sinks the new lining at one operation—
3. Heads over the new rivets.

Write for detailed information about this profit-maker.

MULTIBESTOS BRAKE LINING THE LINING MOST CAR MAKERS SPECIFY

ALSO

MULTIBESTOS Taxitrux Brake Lining

MULTIBESTOS

"229" Transmission Lining for Ford Cars

MULTIBESTOS

Special Transmission Lining for Ford Cars

MULTIBESTOS

No-Wire Transmission Lining for Ford Cars

MULTIBESTOS Brake Relining Machines

MULTIBESTOS Busduty Brake Lining

MULTIBESTOS

Norfolk Transmission Lining for Ford Cars

MULTIBESTOS

Fibre Transmission Lining for Ford Trucks

MULTIBESTOS Quick Change Bands for Ford Cars and Trucks

MULTIBESTOS Clutch Linings

MULTIBESTOS COMPANY, Dept. MA5, Walpole, Mass., U. S. A.

Branches: NEW YORK CHICAGO DETROIT NASHVILLE



Whenever you look at a Traffic Cop, think of Multibestos. This is one of the Multibestos pages in color appearing in consumer magazines.



Today— Anyone can sell the PEER

FROM \$1395 for the Six-80 touring car to \$3795 for the Eight-69 seven-passenger limousine! That's the Peerless price range. As a dealer you know what it means—a market practically unlimited by price.

Three different Peerless models! Three separate price ranges! A real Peerless to meet every demand of size, performance or price.

Do you wonder that dealers everywhere are saying Peerless offers the outstanding opportunity in the automobile business.

Scores and scores of dealers have come into the Peerless fold since the start of the year. In a single month the Peerless dealer organization increased 25%. Probably no other well established automobile manu-

facturer has ever shown such rapid growth. And why?

Simply because the Peerless franchise today offers opportunities for profits that can't be beaten anywhere.

Any dealer who is looking into the future—who believes there is still a lot of money to be made in the automobile business—who wants a line of cars sold under a name that's known and respected all over the world—will do well to look into the Peerless proposition.

There are still some choice localities open to dealers capable of handling a big proposition and handling it well. Write, wire or phone for details of the Peerless franchise.

PEERLESS MOTOR CAR CORPORATION, CLEVELAND, OHIO

Peerless has ALWAYS been a good car

Export Dept.: 615 Fisk Bldg., Broadway at 57th St., New York City • Cable Address: "Mawsonne, New York"



The Remarkable Six-80
\$1395 to \$1795

LESS

*A price range that fits every purse—
A line that meets every requirement*



The Powerful Six-72
\$1895 to \$2995



The 90° V-type Eight-69
\$2995 to \$3795

STEWART-WARNER



An Important
Campaign for Better
Accessories

Stewart-Warner Products

Shock Absorbers
Bumpers
Rear Fender Guards
Spotlights
Electric Horns
Electric Windshield Cleaners
Rear Vision Mirrors
Speedometers
Heaters
Vacuum Tanks
— AND —
Matched-Unit Radio

The small town is the business center of a wide circle of Automobile Owners. The dealer who displays the Stewart-Warner Safety Group of Accessories gets the bulk of the profitable accessory business in his community. All the most needed accessories, under one reliable name, known to every car owner.

STEWART-WARNER SPEEDOMETER COR'N
1826 DIVERSEY PARKWAY, CHICAGO, U. S. A.



Stewart-Warner
SAFETY BUMPERS
Beauty and
Protection

TWELVE MILLION PEOPLE ARE TODAY USING STEWART-WARNER PRODUCTS

Get the Forgetters



These are two of Williams' Display Boards that remind your forgetters. Included free with wrench assortments they display.



THE man who needs a wrench is sure to buy one—unless he forgets.

You can't say, "Need any wrenches?" to every customer. But a Williams' display board can—and does!

Williams' Superior Carbon-Steel Wrenches are ideal sellers from display boards. Their polished heads, and baked-on black enamel finish attract the customer's eye.

On a display board, Williams' wrenches get the forgetters.

And they get the other fellow, too—the man who can use a wrench but hadn't intended to buy one.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

Ask Your Jobber's Salesman, or
Write Us for Details of These Sales-Boosting Boards

J. H. WILLIAMS & CO.
"The Wrench People"

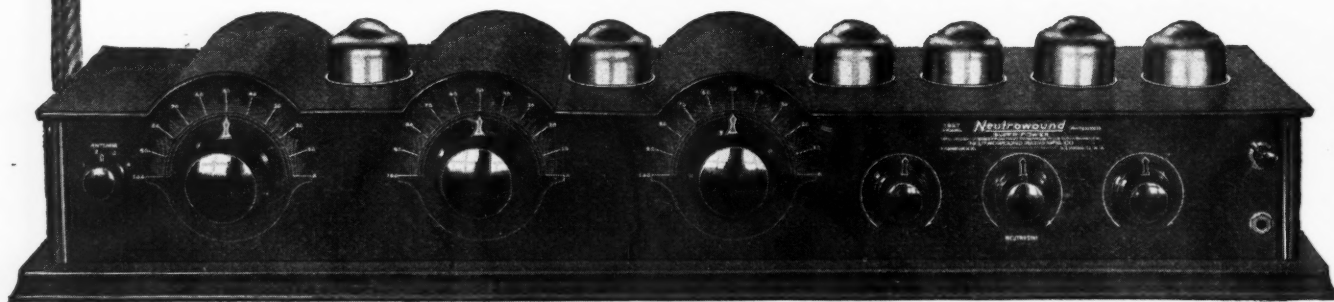
New York

BUFFALO

Chicago

Announcing

"Another Winner"



Neutrowound Radio Receiving Sets are manufactured under our own patents and under a Reciprocal License from the Navy Department of the United States Government.

The Knockout of Radio

A · YEAR · IN

The 1927 Model SUPER-POWER Neutrowound

REG. U.S. PAT. OFF.

Brings In the Distant Stations

Here's power for you! Power to bring in the far-off stations—power to build up the weak signals from smaller stations and make them into "radio"—all with marvelous clarity and fidelity of tone. Here's power perfectly controlled, from a whisper to a roar.

Here's radio without a compromise—radio at its best from one end of the dial to the other—from the lowest wave length to the highest. From 200 meters to 550 meters (the official wave band) you get all the radio there is. There's not a cold spot on the dial—no boiling over in the lower wave lengths, and cold silence in the upper lanes. The stations are separated on the dials—you tune them separately—there's no mad scramble of half a dozen stations all crowding one dial setting. Each station has its own allotted space on the dial.

How Is This Accomplished?

By two exclusive NEUTROWOUND features—the Neutrostat and the Neutrowound Straight Line Frequency Condensers. The Neutrostat is an ingenious device for varying the "B" voltage to best suit the exact wave length you are tuning. Thus, you can keep your NEUTROWOUND right

at its peak of efficiency for each incoming wave length. Imagine the thrill of super-power completely under your control! That's what makes a fan unhappy with any other set, once he tunes a NEUTROWOUND.

Bear in mind, too, the Neutrostat saves "B" batteries by using only the current required. The Neutrostat is indicated on the panel. Less than an hour's tuning will acquaint you with its tremendous possibilities. Its operation is simple and easy to learn.

Neutrowound Variable Condensers

NEUTROWOUND Straight Line Frequency Condensers space out the stations evenly on the dial. Each station has its allotted space and the intervals between stations are all equal. In this six-tube, super-power NEUTROWOUND, with its condensers that space out the stations and the Neutrostat to completely control the power at every wave length, you get all the radio performance it is possible to buy at any price.

\$85

Buys a NEUTROWOUND Six-Tube, Super-power set, and you couldn't buy more radio if you spent a thousand dollars.

West of Rockies, \$90 In Canada, \$115

3-DIAL CONTROL

A radio set has three distinct circuits, each tuned by a variable condenser. Efficient tuning of distant stations depends upon putting these three circuits into resonance with each other and with the broadcasting station. This can be done only by individual control of each condenser. NEUTROWOUND'S outstanding station-getting ability is recognized wherever good radio is known. We are unwilling to sacrifice in the least this first essential of a radio set in a futile attempt to do something which, in itself, is electrically and mechanically impossible. Neutrowound retains individual control of variable condensers as indispensable to good radio.

Station WOK—operating on 5000 Watts—wave length 217.3 meters—owned and operated by NEUTROWOUND RADIO MFG. COMPANY, HOMEWOOD, ILL.

DEALERS: Fill out and mail coupon for full information about the 1927 Super-power NEUTROWOUND and our exclusive territory proposition to sub-distributors.

NEUTROWOUND RADIO MFG. CO.

Dept. 565, HOMEWOOD, ILL.

Radio Division Advance Automobile Accessories Corporation

Dealers Coupon

NEUTROWOUND RADIO MFG. CO.

Dept. 565, Homewood, Ill.

Send complete information Dealers' Discounts and Neutrowound Sales Plan.

Name.....

Street.....

City.....

State.....

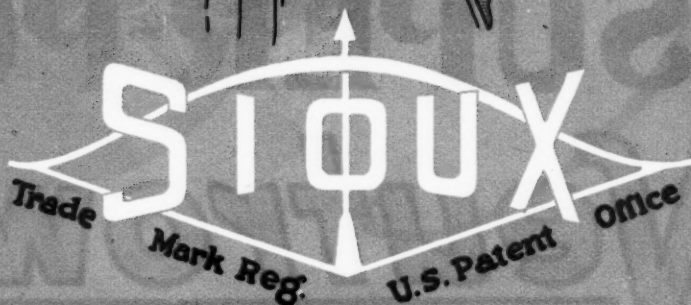
ADVANCE



VALVE STEM GUIDE REAMERS

POINT
CUTTING

OR BORING
REAMERS



A MIGHTY important part of a motor overhauling job is the reconditioning of the valve stem guide holes. You can do this work easily, quickly and efficiently with Sioux Valve Stem Guide Reamers.

The **"Standard"** size offers the only practical and thorough method for *cleaning out* valve stem guide holes with absolutely *no chance* of increasing the size of the holes.

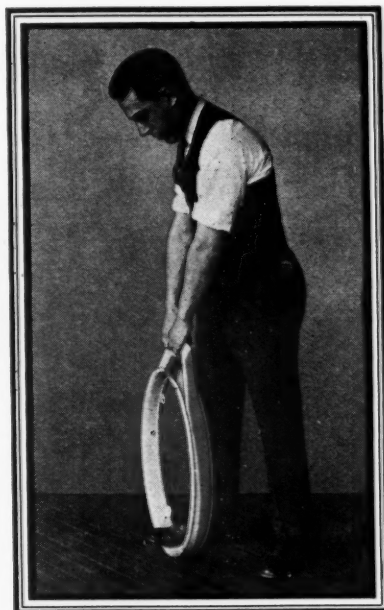
The **"Oversize"** is used for *reaming out* worn valve stem guide holes $\frac{1}{64}$ " oversize when refitting with oversized stems. It makes a clean smooth cut. The cutting is done at the end of the flutes just behind the pilot. The other part of the teeth along the flute *do not cut*, but serve as a guide. The hole cannot be cut out of round or egg-shaped.

Both "Standard" Size and "Oversize" can be re-sharpened without affecting their size. Sizes 5/16 to 1/2", and 1/64" Oversize for each size.

Your Jobber Sells Them

ALBERTSON & CO.

SIoux CITY, IA.



**Just
Snap
It On!**

No More Slow Leaks from Clincher Rims!

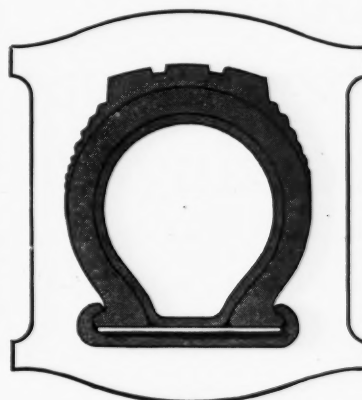
a RIM flap to protect tube against rusted rim

Everybody knows it's almost impossible to use fabric tire flaps in clincher tires. They buckle and cause sharp, puncture-making edges, leaving parts of the tube exposed to the ravages of rusted rims. No wonder slow leaks develop. Thousands of motorists refuse to use fabric tire flaps at all. This condition has existed for years and has probably resulted in millions of ruined tubes. But relief is here—NOW!

Now there's a RIM flap—the greatest tube-saving idea ever. Prevents those slow, hard-to-find leaks on the rim-side of the tube caused by rusted clincher rims.

The Laeng Clincher Rim Flap is an endless piece of specially compounded rubber. Snaps on the rim like a rubber band. Fits snugly all the way round. Stays put. One size fits all clincher rims. Retail price 60c.

More than half of ALL rims are clincher rims. Every time you fix a clincher tire, put a Laeng Clincher Rim Flap on the rim. It means an added profit to you and your customers will appreciate the results they get from them. Order a dozen from your jobber. If he doesn't have them yet, write us QUICK, mentioning his name.



Encases tube in a wall of rubber. Can't touch metal. Smooth and snug.

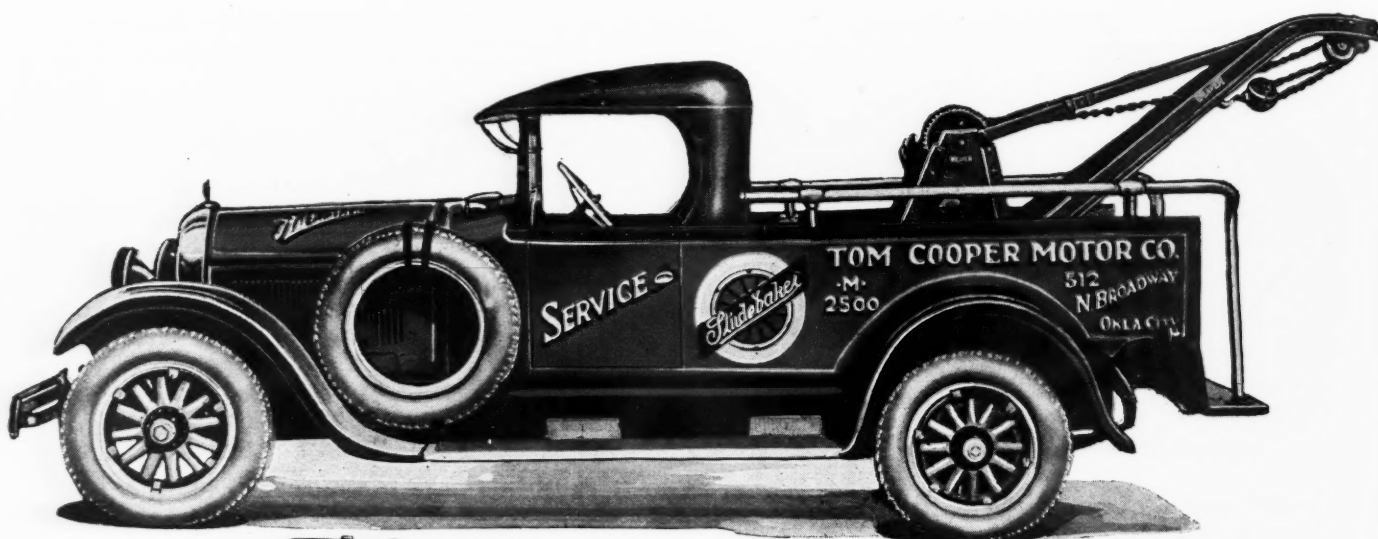
The Laeng Mfg. Co.
3722 Lorain Ave.
Cleveland, Ohio

Laeng *Clincher Rim Flap*

Laeng Mfg. Co., 3722 Lorain Ave., Cleveland, Ohio

Please send me sample carton of 25, 50 or 100 rim flaps at contract dealer's prices parcel post or express C. O. D.

Name.....Address.....



WEAVER

Weaver Auto Crane Model G

Special features include increased height and overhang, adjustment of height of boom by Crane's own power, operation from ground or car, capacity 6000 pounds.

Plan Now for this year's Towing Profits!

TOWING SEASON is growing season. What does it mean to you? Year after year more cars take trails away from home and towing business grows greater.

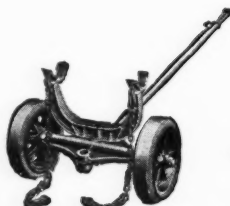
Complete your service to motor cars with Weaver towing equipment. There's not only profit from bringing them in but profit in repair service too.

Send for literature that describes these Weaver towing aids. Prices are moderate enough for even the smallest garage.

WEAVER MANUFACTURING CO.

Springfield, Illinois, U. S. A.

WEAVER CANADIAN CO., Ltd., Chatham, Ont.



Weaver Auto Ambulance Model C

Made especially for towing cars and light trucks. Only one man necessary on job which would ordinarily require several.



Weaver Towing Pole, Model D

Jaw clamps at each end which are universal in application afford absolutely rigid connection and the hooks which fasten into them make possible towing over even the roughest roads, rounding corners, etc.



Weaver Safety Service Can

Handy to carry an extra supply of gas for stalled cars. Spill-proof. No funnels needed to reach even the hardest-to-get-at gas tank.



Sweeping
the Country

Model A—The "Old
Reliable" Bull Dog.

NO ACCESSORY—in a long time—has met with the remarkable success of the new Hinged Type Bull Dog. The Foot Action is so restful—the rubber covered pedal so comfortable that sales on this Bull Dog are increasing by leaps and bounds.

The same reliable Bull Dog Assembly is under the floor boards. Its positive, instantaneous smooth action is known and desired by millions of Ford Owners.

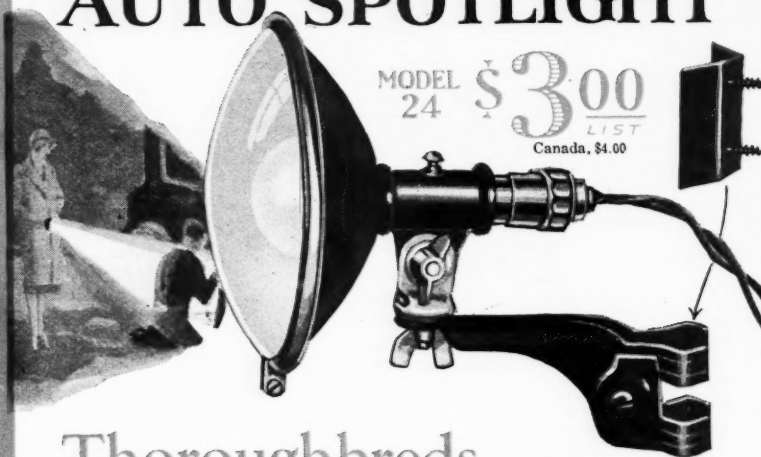
By stocking both Bull Dogs—you will share in the profits of the two biggest successes in the foot accelerator field. Each sells for \$1.50. Each fits all Fords and carburetors for Fords.

The W. H. Thomas Manufacturing Company, Spencer, Iowa

"Bull Dog"
FOOT ACCELERATOR *for* FORDS

Delta

AUTO SPOTLIGHT



Thoroughbreds

All Delta reflectors are triple silvered—brackets drawn metal—hand buffed nickel trimmings. Seven inspections are made during manufacture. Any Spotlight that shows the slightest imperfection is rejected. We insist that every Delta product marketed must be a thoroughbred. Wouldn't you rather handle thoroughbreds?

Models and Prices

	U. S. List	Canada List
No. 50, RoadLite, with bracket mounting .	\$4.50	\$6.50
No. 51, RoadLite, with pedestal mounting .	4.50	6.50
No. 24, 4 7/8 in. black enamel, nickel trimmed .	3.00	4.00
No. 25, 4 7/8 in. all nickerled	4.00	6.00
No. 20, 5 1/2 in. black enamel, nickel trimmed .	4.25	5.75
No. 23, 5 1/2 in. all nickerled	5.50	8.25
No. 22, as No. 20 except with "stop" attachm't .	4.75	6.50
No. 21, Closed car attachment for 20, 22, 23 .	.25	.35
No. 66, Inside Control Spotlight	6.00	9.00
No. 2, Ashette Auto Ash Receiver	1.10	1.50

See your jobber for deliveries. Write to us for further information. Watch for our advertisements in Liberty Magazine.

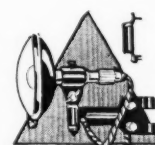
DELTA ELECTRIC COMPANY
503 Delta Block Marion, Indiana



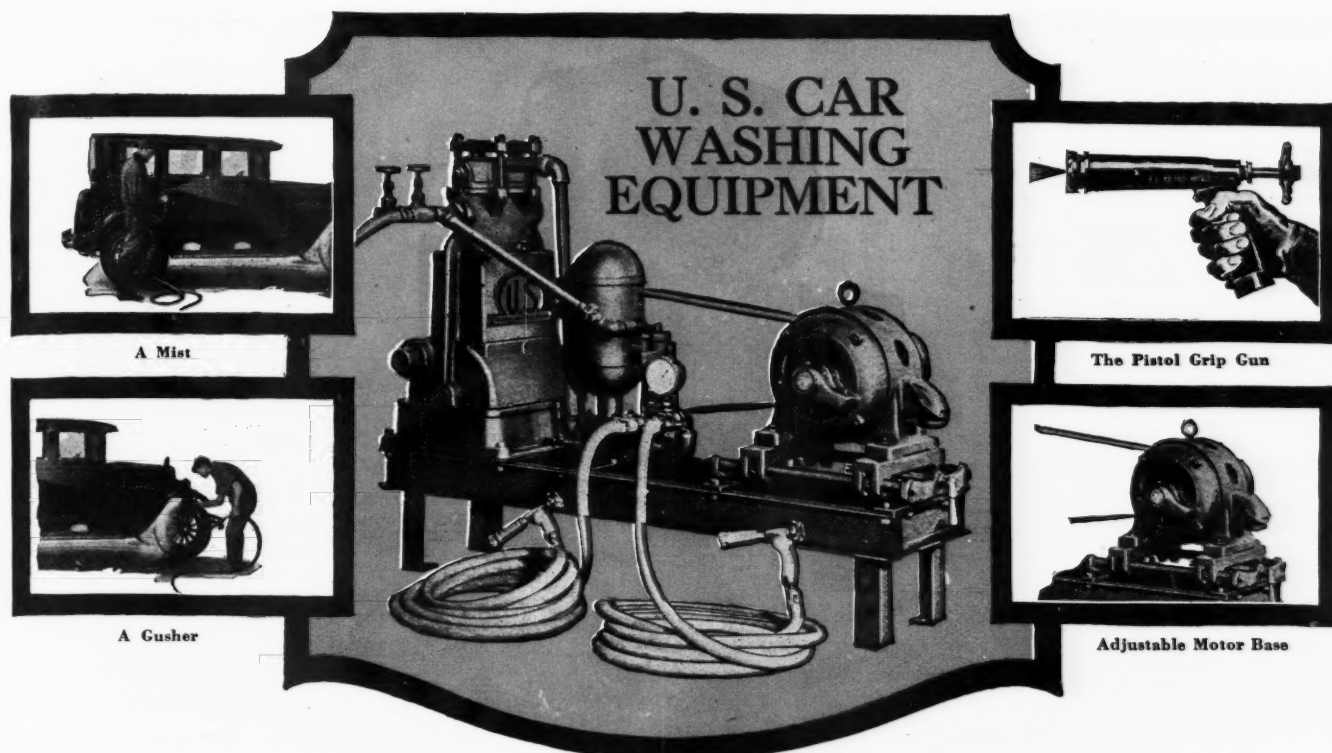
RoadLite 50, \$4.50



RoadLite 51, \$4.50



Spotlight 20, \$4.25



THERE'S NO COMPETITION WHEN YOU HAVE THE BEST

U. S. Car Washing systems are different, as the pump is wholly enclosed and all moving parts are continuously running in oil—no oil or grease cups to bother about! With U. S. Equipment you can connect directly to the cold water service line or warm water supply, eliminating the use of barrel or tank.

The patented U. S. Pistol Grip Gun is short and compact for washing under the fenders, springs and axles,

wheel spokes and near the brake drums, permitting the operator to be close to his work: the valve is easily adjustable for high pressure or soft mist.

The U. S. Adjustable Motor Base eliminates the power wasting, belt wearing idler—just one of the many features which make U. S. Car Washing units different and *Better* than others.

The United States Air Compressor Company
5304 Harvard Avenue, Cleveland, Ohio

*Manufacturers of U. S. Air Compressors; Complete
Paint Spray Units and Car Washing Equipments.*

The
United
States Air
Compressor Co.
5304 Harvard Ave.
Cleveland, O.

Send me your latest
bulletin on car washing.

Name.....

Street.....

City.....

Interested in 2-gun equipment.....
(please check) 4-gun equipment.....

*Send coupon for illustrated
bulletin and full infor-
mation on modern car wash-
ing methods.*

M.A. 4-15

**U. S. CAR WASHING
EQUIPMENT**

"The U. S. Equipment Behind the Gun!"



APEX Genuine Innerings Outsell All Others

First in quality; first in performance and because of these, first in sales from the start; that's the story of Apex Genuine Innerings in a nut shell. Since the development of the original Innering idea by Apex engineers more than five years ago, these products have consistently outsold every similar device in the automotive field.

The reasons for this are readily apparent. They are fundamentally correct design, fair price and the backing of an iron bound guarantee combined with a national advertising on a scale that has made them familiar to motorists from coast to coast.

Today Apex Innerings are stocked exclusively by nearly all leading automotive jobbers in the United States and Canada. Over 2000 Jobber Salesman dis-

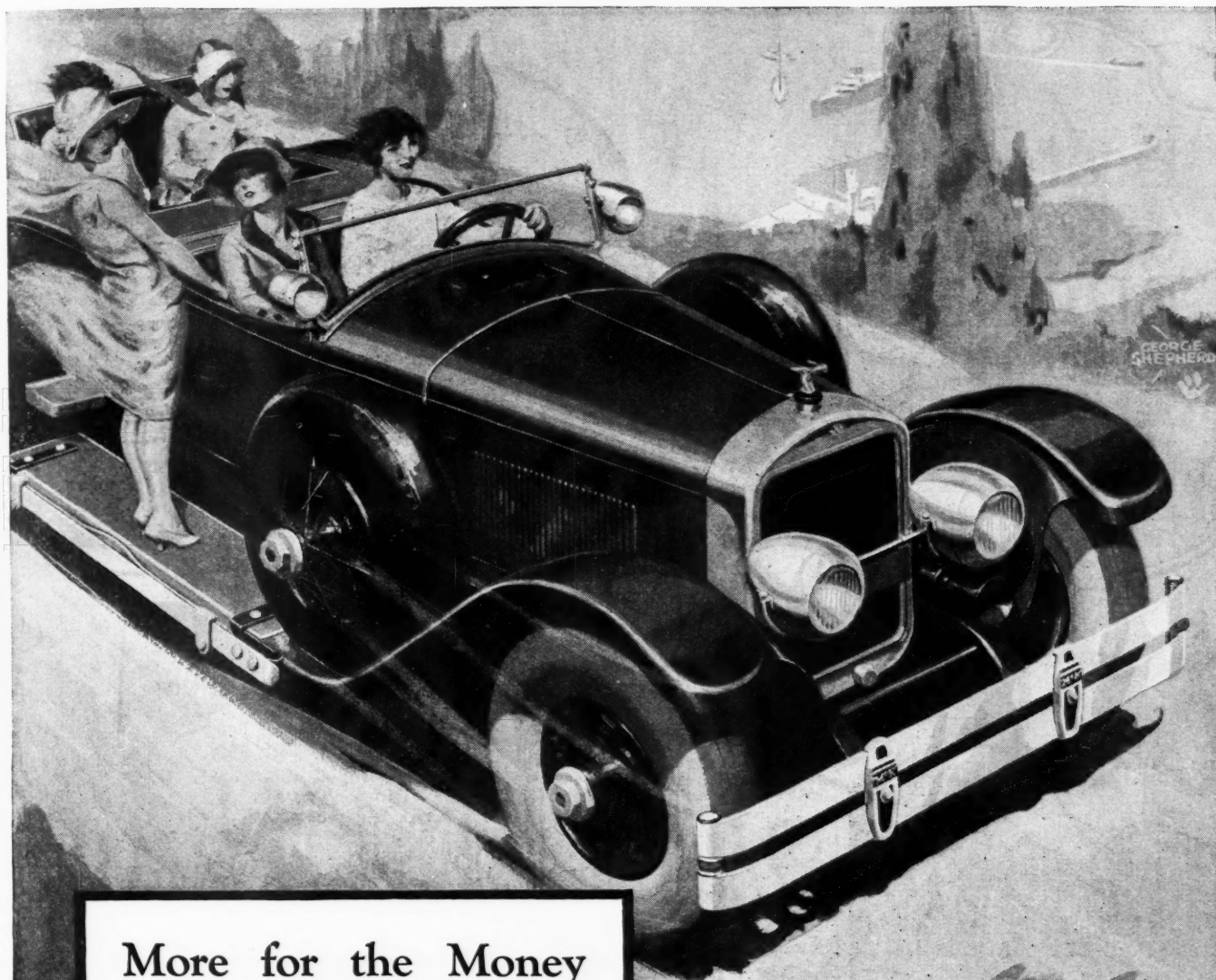
tribute them to thousands of dealers in every section of the country. That fact alone is convincing evidence of Apex leadership.

For the convenience of our dealers Apex Innerings are packed in attractive counter cartons that tie up effectively with the Apex Advertising we have been doing for years. These cartons are a real sales stimulus and earn their place in any dealer's store. All sizes are plainly marked and the guarantee tag is found in every box.

Order an Apex assortment now and be prepared to get your share of the season's sales. If your jobber does not stock them, accept no substitute—send your order direct and we will see to it that you are supplied promptly.

APEX GENUINE Innerings

THOMSON MANUFACTURING CO.
Dept. 7, Peoria, Ill.



**More for the Money
—That's What Sells McKays**

More strength, more good looks, more modern lines—McKay Bumpers match today's motor cars in qualities that make both more popular.

UNITED STATES CHAIN & FORGING CO.
Union Trust Building, Pittsburgh, Pa.

MCKAY ^{RED} _{BEAD} BUMPERS

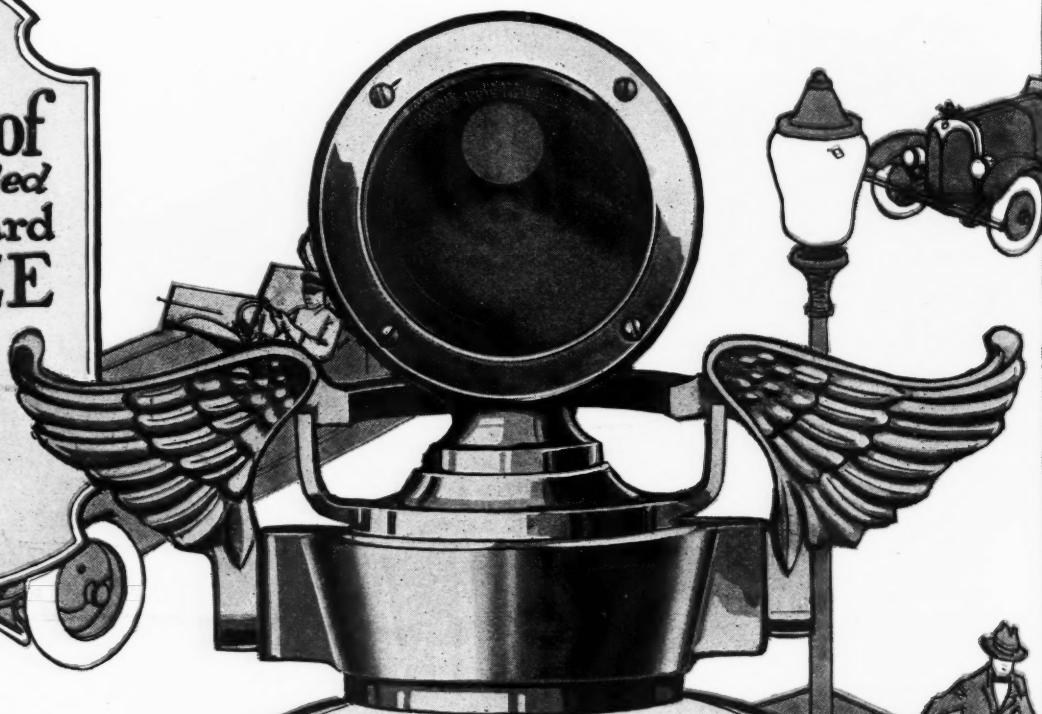
MCK



—more service and more miles in the better black chains in the red band bag marked "McKay."

Heat Proof *heavily nickeled* U.S. Standard BRONZE

—that is the key to the satisfaction Ellison Radiator Caps are giving to users and dealers. No trouble with particles of melted metal dropping into the radiator and clogging up the water pipes. Bronze doesn't melt below 2000° F.



The ELLISON CAP *stays sold*

The striking beauty of the Ellison Cap is matched by its solid quality. When you sell an Ellison, you know you have strengthened the good will of your customer. The solid cast bronze of the Ellison Cap not only protects against trouble often experienced with the ordinary soft-metal cap, but it also holds the nickel-plating, assuring permanent attractiveness. The wing bails lock the cap securely and evenly, yet permit it to be opened easily and instantly.

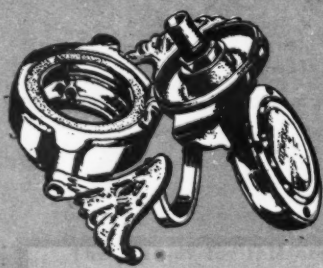
Large size . . . \$6.00

Small size . . . 4.50

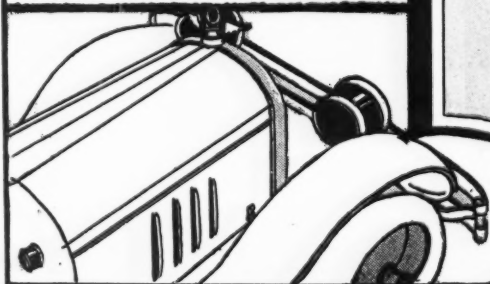
ELLISON BRONZE CO. INC.
JAMESTOWN

N.Y.

See Your Jobber
or
Write Us



The Ellison Cap tilts back, giving free access for filling radiator. When closed it locks evenly and securely. Motometer is easily attached and locked in place to protect against theft.



A New **WEED** Product wins welcome in the trade



The **WEED** *Levelizer*



WEED Levelizers will prove a profitable item for you. They are not merely "another shock absorber," but a perfected device which controls car body rebounds with a smooth flexible restraint. The last word in this type of shock absorbers.

They attach easily and require no servicing after once installed. No oiling or fussy adjustments. They will appeal to your trade.

Levelizers are backed up with the good WEED reputation. They will be widely advertised to the public, to whom the name WEED has meant quality for over 23 years—simple attachments to fit practically all cars.

If your jobber does not handle Levelizers, a request for full details will be promptly answered.

Ask your jobber's salesman about them—or write for proposition.

AMERICAN CHAIN COMPANY, Inc.
Bridgeport, Connecticut

In Canada:

DOMINION CHAIN COMPANY, Limited, Niagara Falls, Ont.

District Sales Offices

Boston

Chicago

New York

Philadelphia

Pittsburgh

San Francisco

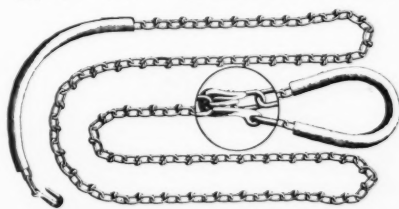
The World's Largest Manufacturers of Welded and Weldless Chains For All Purposes



You have no "closed seasons" when you sell **WEED** goods

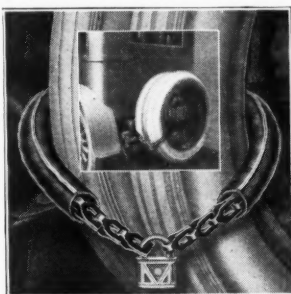
WEED products sell the year 'round. No dead stocks that tie up your capital. WEED accessories turn over fast and give you a good return on your investment. WEED advertising and reputation keep your stocks moving.

Tow Chains



WEED Towing Chains meet the demand for a serviceable, non-kinking and compact towing device. Made in five sizes for all weights of passenger cars and trucks.

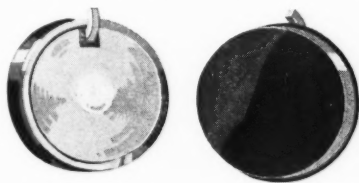
Tire Lock Chains



WEED Tire Lock Chains afford sensible protection against tire thieves. Made in flat and twisted link styles. Also case-hardened bright twist link. With or without lock. Your line is not complete without them.

SHO-LITE

A Glass Arm... Saturated with Light



Front and rear views of SHO-LITE

Sho-Lite, the latest addition to the WEED line. This necessary accessory reflects light of headlights back to the driver. They never fail to show that lights are on or off.

See your jobber or write for full information regarding this profitable item.

WEED CHAINS



There are 20,000,000 motorists in America and the one thing they all know is WEED Chains. WEEDS have given traction and safety from skidding since 1903. They bring your customers to your door and help you sell your other lines. Display them—remember, they are the most profitable of all accessories.

WEED BUMPERS



Accepted for their quality, good appearance and proven stamina. Another profitable line. Made in several styles and sizes—for all cars and purses.

WEED Levelizers

A new WEED product which has attracted instant attention from dealers and jobbers. A perfected rebound device which does the job. If you haven't stocked WEED Levelizers be sure to find out about them.



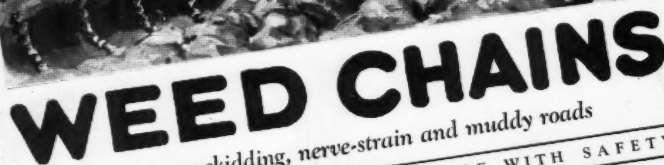
APCO
A PRODUCT OF THE
AMERICAN
CHAIN COMPANY, Inc.
in business
for your safety

THE SATURDAY EVENING POST

You wouldn't start for the theater without your
wedding without the ring—or
Chains.

You wouldn't want to miss out on the fun of WEED Chains tickets—for your wedding or anniversary. You wouldn't want to miss out on a motor trip without WEED Chains. Sunshine and boulevards sometimes end. Then you need WEED Chains... To get you safely home. Or through an unexpected detour. Or over the last long mile to your vacation paradise... Lack of WEED Chains may spoil an otherwise well-planned trip.

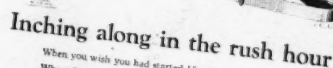
You can identify genuine WEED Chains by their red connecting hooks, galvanized side chains and brass-plated cross chains with the name WEED stamped on every hook. Sold everywhere by good Dealers. Get a set today.



WEED CH...
Overcome skidding, nerve-strain and muddy roads
THERE CAN BE NO COMPROMISE WITH SAFETY

EVENING POST

THERE CAN BE NO COMPROMISE WITH SAFETY



When you wish you had started 15 minutes earlier -
When all around you hear bumps - lady-like bumps, crack-
ing bumps, fresh bumps - mean bumps -
Then you wish your car were equipped with WEED
Bumpers and Fender Guards, "fore and a/ft."

Compact, they are. For "inching along" in the traffic. For close parking space. Strong. Resilient. Beautiful. Correctly designed, bringing the bars at right height to meet without interlocking. They guard fenders without hooking. WEEDS soften mud, a boon, and strain. Also, they

WEEDS soften bumps, absorb bumps, relieve you from nerve-strain. Also, they ^{can} ~~prevent~~ ^{prevent} trade in value of your car, by preventing old-age wrinkles, dents and bottle scars. At good dealers, garages, accessory stores. Tell the man you want genuine WEED Bumpers. He can ^{show} ~~show~~ ^{show} you.

At good dealers, garages, accessory stores. Tell the man you want genuine WEEB Bumpers. He can get them for you.

AMERICAN CHAIN COMPANY, Inc.
 BRIDGEPORT, CONNECTICUT
 In Canada: Dominion Chain Co., Ltd.

AMERICAN CHAIN COMPANY, Inc.
BRIDGEPORT, CONNECTICUT
In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario
Entree Sales Offices: Boston Chicago New York
Philadelphia Pittsburgh San Francisco

**WEED
BUMPERS**
Sensible Protection—Fore and Aft

Cut your selling costs

AMERICAN CHAIN COMPANY, *Inc.*
Bridgeport, Connecticut

In Canada:

DOMINION CHAIN COMPANY, Limited, Niagara Falls, Ont.

District Sales Offices

Boston

Chicago

New York

Philadelphia

Pittsburgh

San Francisco

The World's Largest Manufacturers of Welded and Weldless Chains For All Purposes



PAYS FOR ITSELF IN 60 DAYS

MONEY BACK QUICK

—is what you want and is what you get when you install a Hardie Car Washer. The Hardie quickly pays back its cost through—

Saving half the time—required by old methods.

Saving space—by getting cars or trucks out quicker.

Saving materials — through knocking off grease, etc., with less use of soap, cleaning solutions, water, etc.

H. V. Hart Co., CHRYSLER DISTRIBUTORS for Maryland, say: "Your washer does a better job in half the time required by hand methods. We estimate that it paid for itself in labor and materials the first 60 days we owned it."

Means Repeat Business

Miller-Judd Co.—NASH DISTRIBUTORS for So. Michigan, state—"We have doubled our wash rack business since we installed a Hardie Washer."

The Hardie actually helps carry the load for other equipment also, for when customers come for a car wash you can suggest repairs or accessories. And vice versa. Better write our Department D-5 for literature on this big money maker at once.

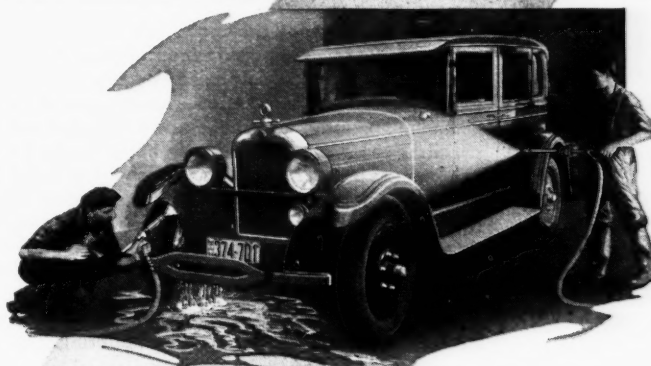
HARDIE MFG. CO.

HUDSON, MICH.

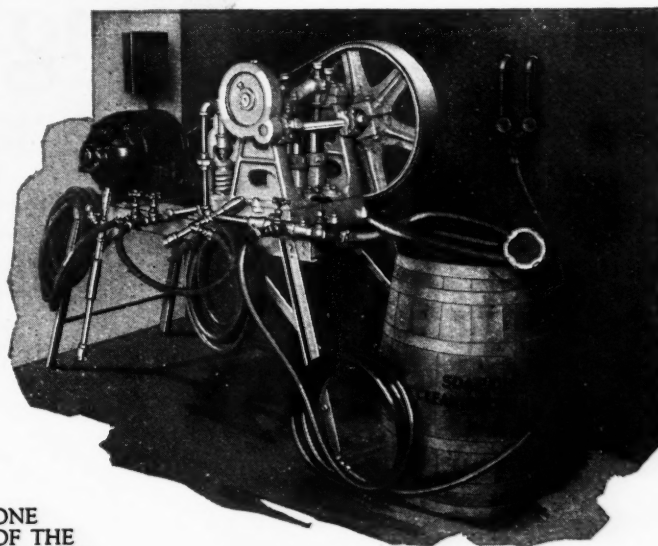
LOS ANGELES, CAL.

1780 BROADWAY, NEW YORK

PORTLAND, ORE. PETROLIA, ONT.



A 300 LB. STREAM FOR CLEANING CHASSIS AND FINE, MIST LIKE STREAM FOR CLEANING BODY



ONE OF THE SIX SIZES OF HARDIE WASHERS -1 CAR TO 8-CAR

FOR SALE BY LEADING
AUTOMOTIVE JOBBERS
EVERYWHERE

DEPENDABLE
HARDIE
CAR WASHER

BUILT ON THE AUTOMOBILE PRINCIPLE

AND BACKED BY A 26-YEAR EXPERIENCE MAKING HIGH PRESSURE PUMPS.



BOTH ends of the ordinary type of flap are fitted over the valve stem of the inner tube, establishing the fixed length of the flap, but it is necessary for the flap to be longer than the rim circumference in order to allow it to pass over the rim when mounting tire.

During inflation of the inner tube, the flap attempts to contract (contrary to popular conception, flaps do not expand during inflation but attempt to contract) and adjust itself to the rim circumference. But the circumference of the ordinary overlong flap cannot be decreased sufficiently to permit it to always ride centrally between the beads of the tire because both ends are fitted over valve stem. In an endeavor to take up its surplus length, the flap frequently is forced to wrinkle, crease and side slip off the rim and up the side wall of the tire into the flexing area.

This action exposes the inner tube to the edges of the tire beads and rust on the rim and results in chafing, tube pinching, strain on valve stem causing leaky valves, rim cutting, freezing to the rim, difficulty in demounting, etc.

Avoid
the squirming
FLAP

that has been *Biting*
your *Inner Tubes*

The Ring Shaped Endless Flap

LICENSED UNDER
BEANEY PATENTS

Note that the two self-adjusting ends, opposite the valve stem, overlap and slide on one another in perfect alignment, guided by the loops. During inflation of inner tube the ends slide over one another to permit the flap to contract and to fit smoothly the tire, tube and rim.

Some Advantages

The Beaney Double Self-Adjusting Flap eliminates valve strain.

It reinforces valve stem and aids balance of the tire.

It fits contour of tire, tube and rim without wrinkling or creasing.

It is a ring-shaped flap, which is the proper shape.

It is the only double self-adjusting endless flap with two independently sliding ends.

It expands and contracts and rides centrally.

It prevents inner tube from becoming exposed to beads of tire and to rust on rim.

It prevents friction, chafing, pinching, valve strain, rim cutting, difficulty in demounting, etc., etc.

It can be used in either Clincher or Straight Side Tires on any type rim.

To Tire Dealers

One of the advantages to the dealer is the elimination of approximately twenty standard sizes, requiring a smaller investment in stock with more frequent turnovers and a greater margin of profit.

Use
the

BEANEY

SELF-ADJUSTING TIRE FLAP

← Hole for Valve Stem

Send all inquiries to one of the following manufacturers licensed under Beaney Patents

Lee Tire and Rubber Co., Conshohocken, Pa.

Kelly-Springfield Tire Co., 250 West 57th St., N.Y.C.

Dunlop Tire and Rubber Goods Co., Ltd.

Toronto, Ontario, Can., Sole Distributors for Canada.

The "SHOCK PAD"

The "Open Sesame" to Tire Satisfaction

THE word SHOCK PAD itself contains no magic significance. But it represents the most vital, important advance in tire construction that has been made during the past quarter of a century. It marks a new era in greater mileage, more assured service, greater freedom from trouble and possibilities of breakdown, and a supreme satisfaction that no other tire without the SHOCK PAD can give.

The SHOCK PAD is new. It has just been introduced to the American motor public, but everywhere it has been received with unusual enthusiasm.

The SHOCK PAD is an inner wall of live rubber vulcanized as an integral part of the inner section of the carcass. It protects the inside of the tire against internal friction in the same manner that the outer tread protects the carcass against the wear and friction of the road. Greater strength, greater flexibility, greater ability to withstand low air pressure, greater protection of the tube against friction and wear—these are a few of the SHOCK PAD advantages.



The wonderful business building possibilities of SHOCK PAD tires are being rapidly recognized by enterprising tire dealers in every section of the country. SHOCK PAD tires rise far above the price competitive market. They sell on a definite superiority that can be seen and understood by any motorist.

NATIONAL  BALLOONS
REMINGTON CORD TIRES

The National Tire & Rubber Co.
East Palestine, Ohio

Gentlemen:

Send me without obligation a copy of "The Plan, the Plant, and the Purpose back of the SHOCK PAD, and new 'National' idea in Tire Construction," and details of distributors agreement.

Name _____

Address _____

The SHOCK PAD principle and construction is exclusive with National Balloons and Remington Cords. In attractiveness of tread design, in materials, in all details of construction, these tires are the equal of the finest tires made and the addition of the SHOCK PAD gives them a superiority which is outstanding. You can make continuous and increasing profits, and build up your reputation by featuring these tires.

The National Tire & Rubber Co.

East Palestine, Ohio



Fully protected
by U. S. and
Foreign Patents.

*"It's equipped with
the Telegage"*

**Complete
Ready to
Install
\$8.50**

*The K-S Telegage is
standard equipment on
these leading cars:*

Wills Ste. Claire 8
Paige
Willys-Knight 66
Nash Advanced 6
*Oakland
Studebaker
Wills Ste. Claire 6
*Oldsmobile
Willys-Knight 70
Reo Sedan Bus
Ruggles Bus
Commerce Bus
*Standard equipment
on some models;
optional equipment on
other models.

Separate models of the
K-S Telegage are now
carried in stock ready
for installation on any
of the following cars:

Dodge Available for
1924 and 1926
Jewett 1922-25
Jewett 1926.....
"New Day"
Buick Standard 6.....All
Overland 6All
Nash Special 6.....1925
Nash Special 6.....1926
Nash Advanced 6
1922-25
Hudson1921-26
Olds 61925-26
Oakland 61924-26
Reo1923-26
Flint 401924-25
Essex 611 gal.
tank only
PontiacAll
AjaxAll
Chrysler 4.....All
Chrysler 6 not equipped
with dash gauge.....All
Chrysler 6 equipped
with dash gauge.....All
Buick Master 6 not
equipped with dash
gauge1924-26
Buick Master 6
equipped with dash
gauge1925-26

It's more than just a "talking point"—this friendly gauge that you now see on one out of every three cars that sell for \$1,000 or over.

So widespread has been its adoption as standard factory equipment, that its absence on the instrument board is a thing that many car buyers notice, whether they mention it or not.

Now that twelve cars have adopted it—cars that cover practically the entire range of every price class—many dealers find it good business to install it on the competing cars they offer to their trade.

And why not? The Telegage is the only gauge today that can meet this test for accuracy! Fill the fuel tank with a gallon measure and watch how the Telegage checks your filling, gallon for gallon. No wonder the demand for the Telegage has increased in a short time from 1,000 per month to 35,000 per month as standard equipment on these cars.

Dealers find the Telegage one of the fastest selling accessories they can handle. Some of the largest car dealers equip every car they sell with the Telegage. You, too, will find the Telegage a welcome ally—not alone because it helps sell cars, but for its additional profit. Simple to install; the tank unit fits in the float gauge opening and a template (included) makes it easy to fit the Telegage on the dash.

Our Saturday Evening Post advertising is educating motorists to look for the Telegage on the cars they buy. Keep ahead of them. Write today for our proposition to dealers.

KING-SEELEY CORPORATION
298 Second Street ANN ARBOR, MICHIGAN

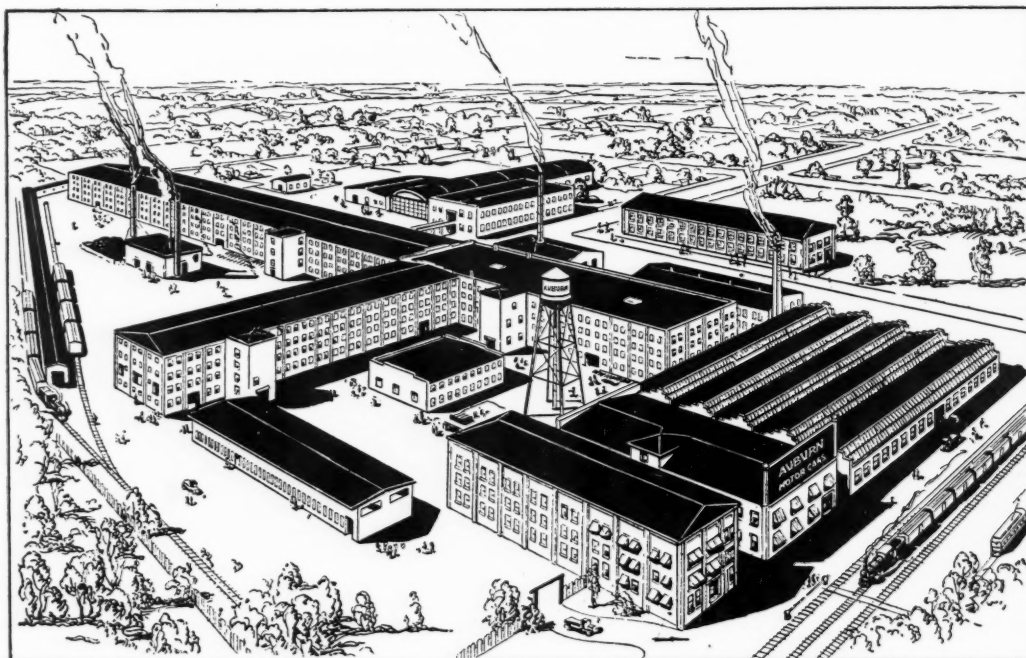
Chicago Branch: 2450 Michigan Blvd.

The K-S **GASOLINE**
Telegage



BE CERTAIN WITH THE K-S TELEGAGE

AUBURN



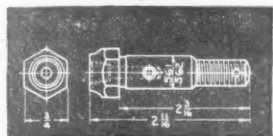
The Auburn factory has over three quarters of a million feet of floor space. The public's belief in Auburn's policies and their demand for Auburn cars is reflected in the present buying which is at the rate of two million dollars a month. Things are done, pains taken to insure uniform quality at the Auburn factory that are not found elsewhere.

\$2,000,000.⁰⁰ a month!

**Enlarged production offers
wonderful money-making
opportunity for more dealers.**

8-88 Sedan \$1995; 8-88 Brougham \$1795; 8-88 Coupe \$1745; 8-88 Roadster \$1695; 8-88 Touring \$1695; 6-66 Sedan \$1695; 6-66 Brougham \$1495; 6-66 Coupe \$1445; 6-66 Roadster \$1395; 6-66 Touring \$1395; 4-44 Sedan \$1195; 4-44 Coupe \$1175; 4-44 Roadster \$1145; 4-44 Touring \$1145. Freight and tax extra.

AUBURN AUTOMOBILE COMPANY, AUBURN, INDIANA

*"Made to Blue Print"*

Who is the World's greatest Fleet Owner?

YOU, and the other garage and service men of the country are the world's greatest fleet owners. More than twenty million cars and trucks are working for you day and night grinding out more than a half billion chassis bolts and bushings each year.

Inefficient lubrication, together with the absence of rotary motion of the bushing on the bolt, results in friction at the point of bearing. The weight of the car, plus the constantly oscillating,—or teeter-totter,—action of the bushing on the bolt, pushes the grease away and prevents its ever reaching the point of wear. As the bolt and bushing wear at the point of bearing, the clearance opposite that point increases, permitting a rattle. And the greater the wear, the greater the rattle.

Some service men vainly attempt to repair the wear that makes the rattle, by the turn of a wrench or a shot of grease. Others are profiting by pointing out to car owners the economies of chassis bolt and bushing renewals at least once a year.

These twenty million cars and trucks working for you, each with an average of sixteen chassis bolts and eighteen bushings, represent Six Hundred Eighty Million opportunities for profit. Our Monthly Bulletins entitled, "The Tale of a Bolt," tell how **YOU** can get your share of these profits. If you aren't getting these Bulletins, write us, giving your Jobber's name.

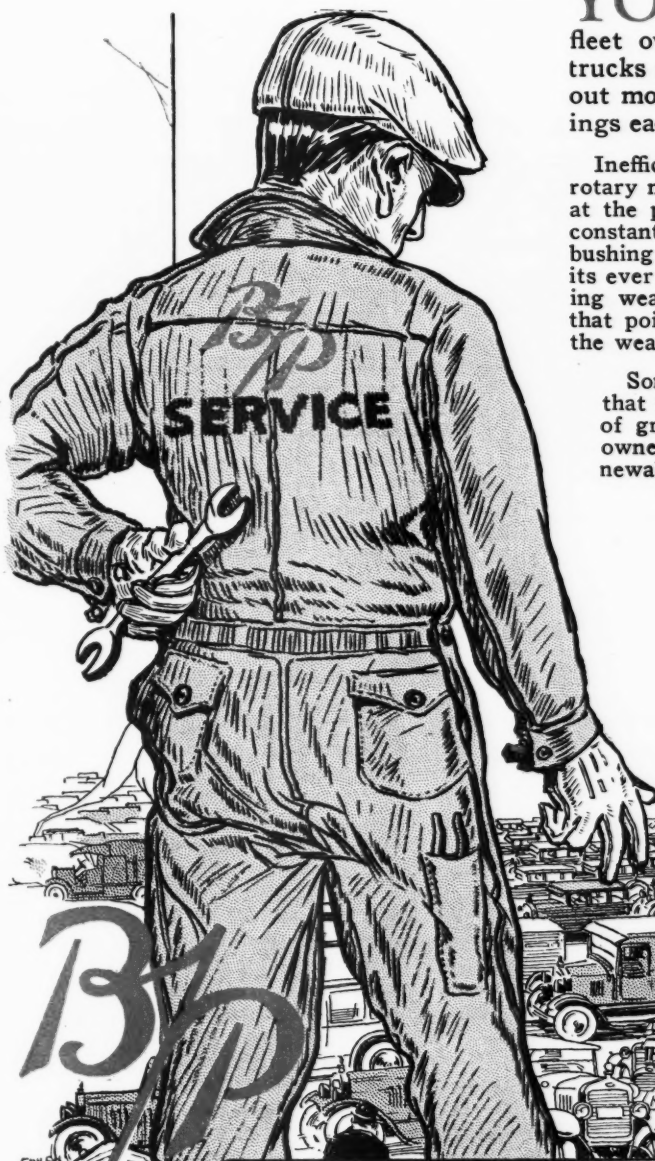
THE FOSTORIA SCREW CO.

305 Blue Print Ave., Fostoria, Ohio

Export office: 30 Water St., New York, N. Y.

Cable Address: Widdbloco

Codes Used: Bentley, A.B.C. 5th Edn. Western Union



BOLTS BLUE PRINT BUSHINGS
THE *Bp* LINE

Blue Print Bolts and Bushings are made to the blue print specifications of the car manufacturers and are, therefore, exact duplicates of original equipment,—not replacement parts.

King Bolts—Spring Bolts—Tie Rod Bolts—Bushings



A tonic for Sick motors

You know the symptoms; hard starting, low mileage, lack of power, fouled plugs, knocks at certain speeds, etc. And you know how often new plugs, carburetor adjustments, reground valves, and a dozen other things, have offered only temporary relief.

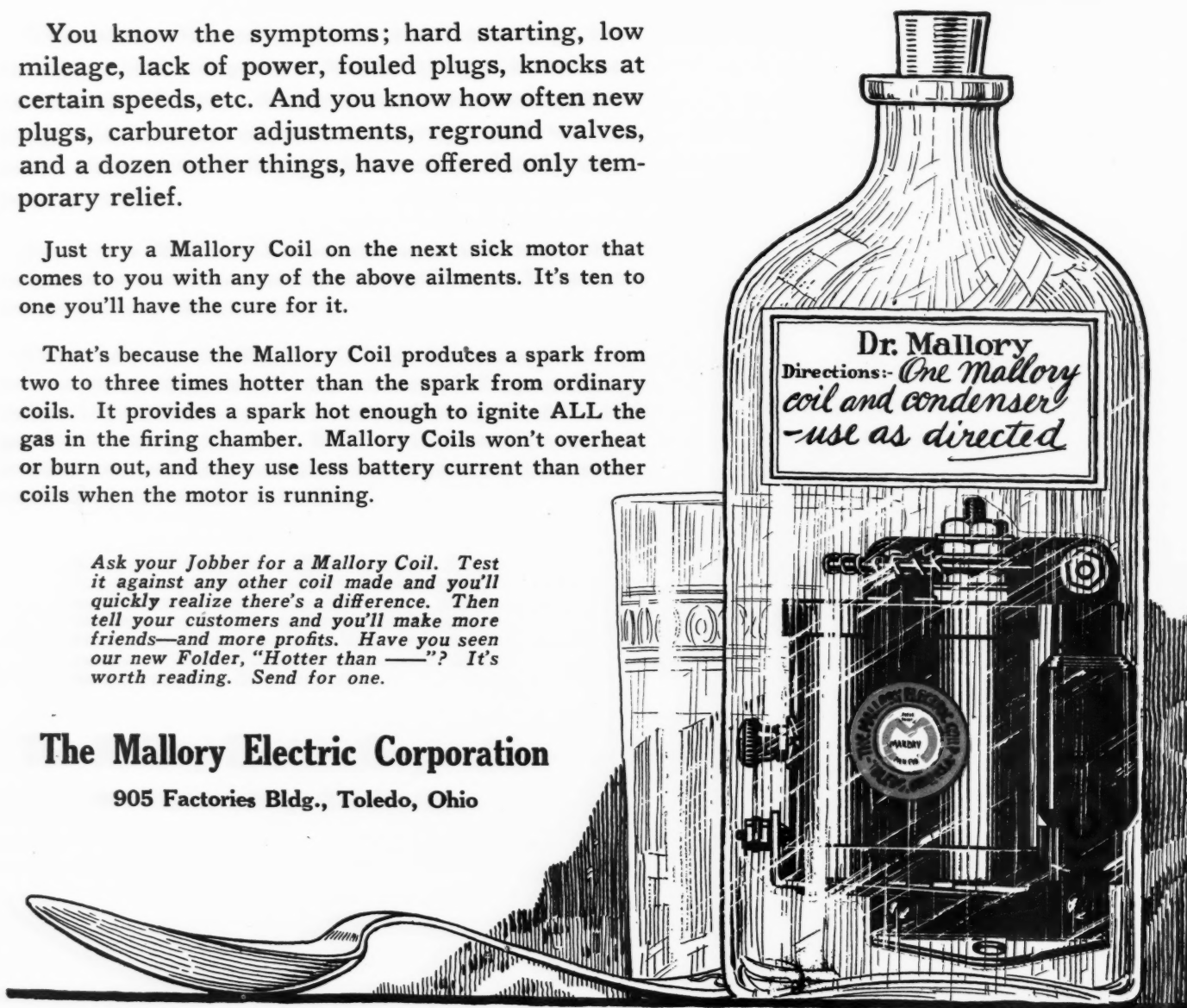
Just try a Mallory Coil on the next sick motor that comes to you with any of the above ailments. It's ten to one you'll have the cure for it.

That's because the Mallory Coil produces a spark from two to three times hotter than the spark from ordinary coils. It provides a spark hot enough to ignite ALL the gas in the firing chamber. Mallory Coils won't overheat or burn out, and they use less battery current than other coils when the motor is running.

Ask your Jobber for a Mallory Coil. Test it against any other coil made and you'll quickly realize there's a difference. Then tell your customers and you'll make more friends—and more profits. Have you seen our new Folder, "Hotter than —"? It's worth reading. Send for one.

The Mallory Electric Corporation

905 Factories Bldg., Toledo, Ohio



Mallory

Ignition Coil

More Air Service Per Dollar

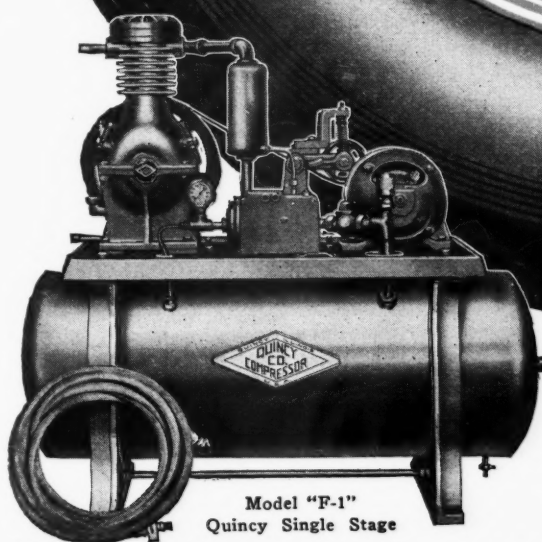
Civilization rides on tires and demands instant air service — from you. Deliver it and civilization smiles and brings you its dollars.

But just let one of its members cramp his legs beside a tire, trying to get air pressure from a clanky, leaky compressor, and he'll quickly consign your station and everybody in it to the hot place.

Why take a chance on losing his trade?

There's no wear-out to a Quincy Compressor. Simply connect to current. Lubricate a point or two and collect the results in steady customers and steady profits. The attached coupon will bring complete details. No obligation whatever. Just fill it out and mail.

QUINCY COMPRESSOR CO., QUINCY, ILL.
(Formerly Wall Pump and Compressor Co.)



Model "F-1"
Quincy Single Stage

Quincy Compressor Co.,
217 Maine St., Quincy, Ill.

Without being obligated I would like to know how a Quincy Compressor can boost my sales and profits.

Name.....

Address.....

City.....State.....

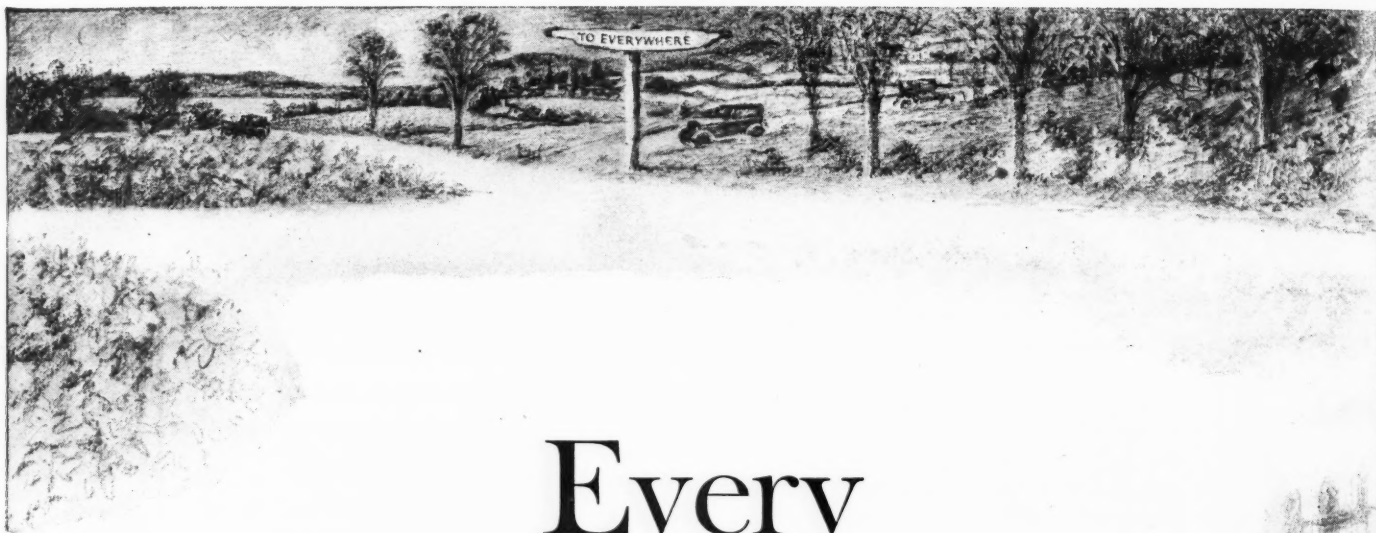
J482

QUINCY COMPRESSOR CO.

Quincy



Illinois



Every family wants a car

PRODUCTS OF GENERAL MOTORS

"A car for every purse and purpose"

CHEVROLET
PONTIAC
OLDSMOBILE
OAKLAND
BUICK
CADILLAC
GMC TRUCKS

Fisher Bodies • Delco and Remy Electrical Equipment • Harrison Radiators • Jacox Steering Gears AC Spark Plugs—AC Speedometers • New Departure Ball Bearings Delco-Light Electric Plants Frigidaire Electric Refrigerators Jaxon Rims • Brown-Lipe-Chapin Differentials and Bevel Drive Gears Hyatt Roller Bearings • Inland Steering Wheels • Klaxon Horns.

General Motors cars and trucks, Delco-Light electric plants and Frigidaire electric refrigerators may be purchased on the GMAC Time Payment Plan.

The closed cars have Fisher Bodies, also a "Product of General Motors."

THE American family wants a home *and* an automobile. These are perhaps the two strongest desires.

Banks, insurance companies, and building and loan societies have made it possible for millions of families to purchase homes on deferred payments, and to enjoy them during their active years when the children are young and the home means most.

General Motors organized the General Motors Acceptance Corporation seven years ago to meet the demand for similar facilities for the pur-

chase of General Motors cars.

General Motors made the GMAC Plan a part of its own operation, kept under its own control. This has always meant low rates, fair terms, and adherence to sound credit practice.

General Motors makes "a car for every purse and purpose."

It is to *your* advantage to buy the car that you can comfortably afford, on a payment plan that gives you a sure margin of safety. Select the car that best suits you from the General Motors line and ask the dealer to explain the GMAC Plan.

© G.M.C., 1926

GENERAL



MOTORS

This Timer "Has Everything"

THIS amazing timer has the features that appeal to the timer-wise Ford owner — 12 of them!

He wants performance — high efficiency — trouble-free service. In the Milwaukee Oil-less he gets them — plus the exclusive, patented, Wipe-and-Break Principle, Self-Centering Feature — and 10 others.

This timer needs no oiling — no cleaning — no attention. It provides absolutely accurate timing and even firing, under all conditions.

It is always in true alignment with the camshaft. Self-Centering, an exclusive advantage, makes uneven firing impossible.

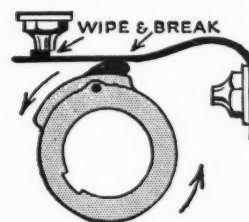
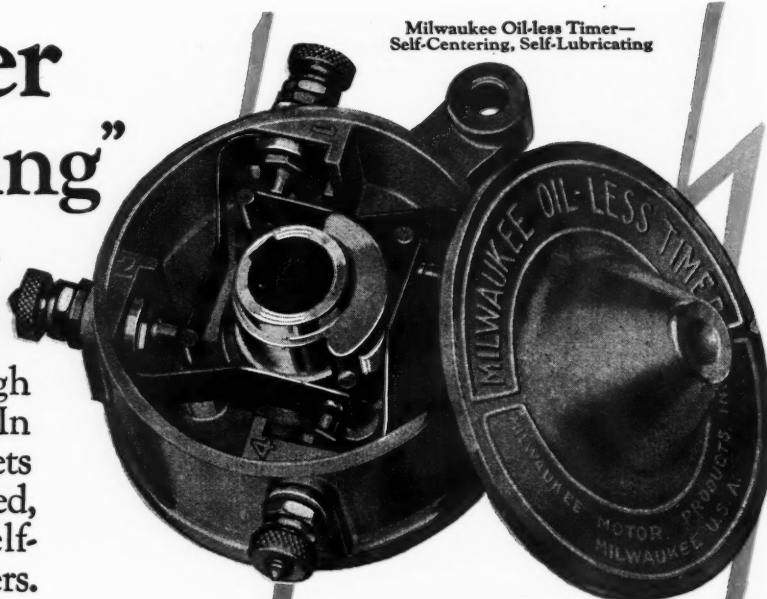
MILWAUKEE Oil-less TIMER for Fords

This super-power, care-free timer operates on the same principle as the Milwaukee Timing System. It retails at — \$2.75.

Attractive discounts — ask your jobber's salesman.

Display Free. Write us direct for this sturdy steel display that holds a Milwaukee Oil-less Timer out of stock — and sells it. Handsomely lithographed — attractive for both window and counter display.

MILWAUKEE MOTOR PRODUCTS
Incorporated
MILWAUKEE, U. S. A.

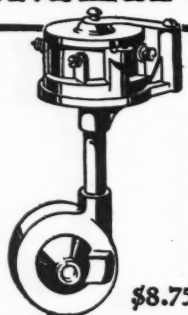


The "Wipe-and-Break" Principle

This patented design combines sliding cam action with the positive make-and-break of tungsten points. A definite wiping action takes place between the points when pressed together. This keeps points clean and prevents pitting. The graph shows one of the four sets of firing points.

Feature No. 1

TIMER HEADQUARTERS — since 1905



MILWAUKEE Timing System

Contact action shoots a flaming spray of sparks into the cylinders. Each coil builds up its highest voltage and produces hottest possible sparks. No. 400, for 1926 Cars and Trucks — \$8.75. No. 500, for all Fords — \$8.75. No. 300, for 1925 and earlier Fords — \$10.00.

\$8.75



The New Milwaukee Oil-less Timer

This timer operates on the same principle as the Milwaukee Timing System. Self-centering — not affected by wobbly camshaft. No oiling, cleaning, or attention. Operates perfectly throughout its long life.

\$2.75

The Bakelite Case Milwaukee Roller Timer

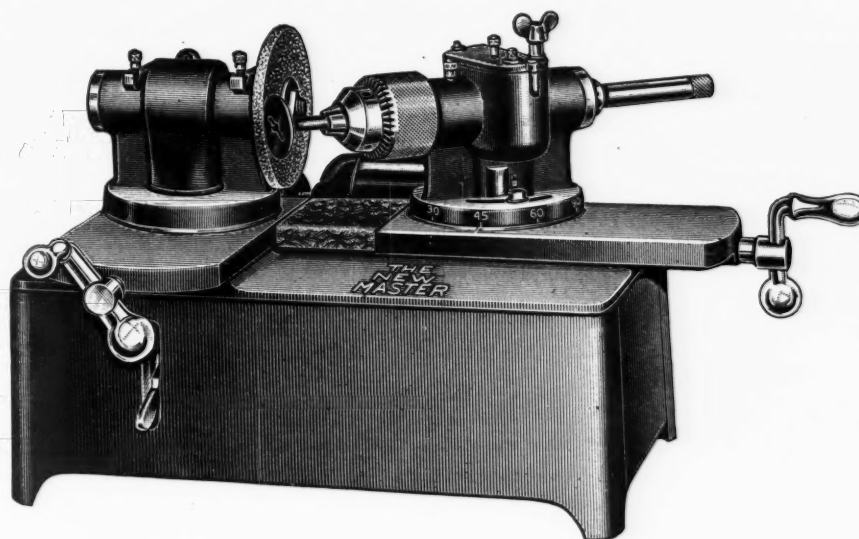
Dependable roller type. Short-proof case. Bronze brush assembly — precision-gauged. Dependability established by many years of unfailing service in all parts of the world. Millions sold.



\$2.00



THE NEW MASTER VALVE REFACER



Helps Make Flat Rates Pay!

The proper selection of modern equipment for your shop makes flat rates pay. More income from service work—on a basis satisfactory to you and your customer alike—makes it worth your while to equip with the greatest care for profits.

The new MASTER Valve Refacer is built to meet your problem of making the most money possible on operations it handles. It is the

Simplest—Sturdiest—Lowest Priced

machine of its kind on the market.

Grinds any angle valve, 30°, 45° and 90°.

Universal chuck. Takes valve stems up to $\frac{5}{8}$ in.

Grinds valves with heads up to $4\frac{1}{2}$ " in diameter.

Grinds valve seat reamers.

Grinds valve tappets and valve stem ends.

Equipped with $\frac{1}{4}$ h. p. dust-proof motor and Jacobs-Chuck.

Machine weighs 150 lbs. packed.

The New Master is a precision grinder and any mechanic can turn out perfect work with it.

Sold under a positive guarantee to give satisfaction.

Write for complete details.

Master Mfg. and Sales Corp.

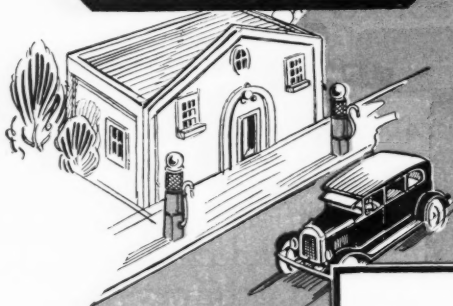
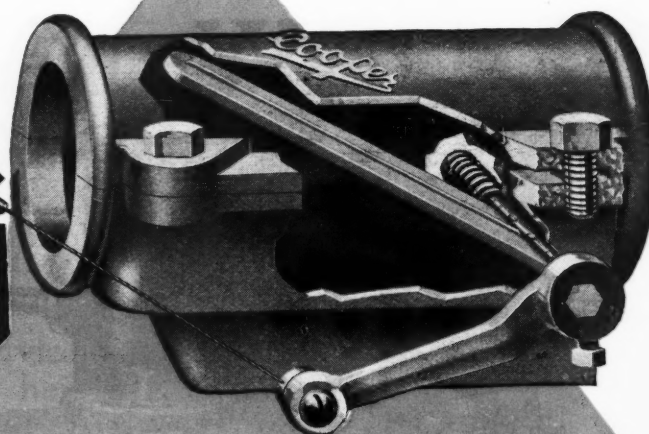
General Offices, 504 Monadnock Block.

Chicago, Ill.

Cooper Dash Control

A handy control for Cooper Cut-out, choke, radiator shutter, etc. Beautifully finished in polished nickel.

Price \$2.50



FEWER STOPS for FUEL

Every gallon of gas and oil goes farther when there's a Cooper Cut-out to help rid the motor of costly power-stealing carbon.

The Cooper, installed between the engine and the muffler, by providing unobstructed outlet for the exhaust gases prevents clogging of the muffler, back pressure and fouling of the motor.

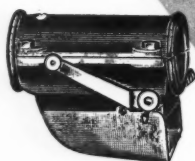
Away With Carbon and Sluggish Performance

No other device so distinctly brings out the sharp staccato crack of a perfectly tuned motor. No other cut-out is so completely chatterproof and silent when closed. Dealers all over the country are making big money with this popular money-saving auto necessity. Why not join them? See your jobber today.

Price \$2.50 to \$5.00

Chevrolet Special Cut-out

This Cooper Cut-out is designed for exclusive use on Chevrolet cars. It has all the features of efficiency for which Cooper products are famed and is one of the best investments for the money that the Chevrolet owner could make. At the low price of \$4.00 it widens your field for profit. Get in on this money making proposition.



Ten Sales Boosters

1. A scientifically designed engine tester.
2. Blows out loosened carbon.
3. Easily installed without severing or weakening exhaust pipe.
4. Ruggedly made with extra heavy flapper and spring.
5. Chatterproof, silent when closed.
6. Increases power of motor.
7. Saves gasoline.
8. Self cleaning. Mud, water and dust proof.
9. Relieves back pressure on motor.
10. A combination muffler cut-out, engine tester and carbon outlet valve combined.

The Cooper

CUT-OUT

Engine Tester and Carbon Outlet Valve

Cooper Manufacturing Company

430 South First Avenue, Marshalltown, Iowa

Exclusive Sales Representatives, THE FULTON COMPANY, Milwaukee, Wisconsin

Cooper Dash Gasoline Gauge for new model ford



New Opportunity For Extra Profits

Gone is the annoyance of running out of gasoline! The Cooper Gauge indicates right in plain view of the driver how much gas is in the tank! Every Ford owner will want one. Accurate, dependable, easily installed. The neat rectangular glass covered dial, is nickled to match ammeter and only requires three small holes in the dash to install.

It cannot leak, is not affected by temperature and the float is guaranteed not to gas-log.

The Cooper Dash Gasoline Gauge supplements the line of other Cooper necessities—opens up the way to greater year 'round profits for YOU. See your jobber or write us today for prices and full details. Price \$3.00.

Price \$3.00

The Cooper Dash Gasoline Gauge for new model Ford is positive and accurate, because it develops no lost motion, does not require periodical adjustment, and has no intricate mechanism to get out of order.

Set consists of specially designed float mechanism installed with special die casting adapter cap which fits into the standard Ford tank opening without any alteration.

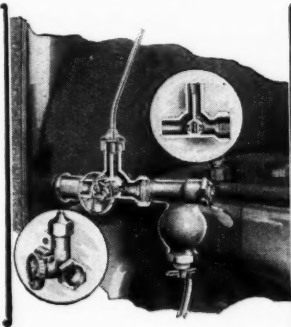
This dependable Gasoline Dash Gauge is backed by the usual Cooper Guarantee of satisfaction.

Cooper Tire Lock



Here, at last, is a real thief-proof Tire Lock. Protects spare tire and rim from theft—prevents removal also of carrier from the car. A genuine one hundred per cent tire lock—and a big seller because it is appreciated by Ford owners. Price (without padlock) \$1.00.

Cooper Reserve Valve



A ready seller because it warns the motorist when the gas level drops to one gallon. At this point the valve automatically cuts off the feed to the carburetor. By simply opening the valve, the remaining gallon in the tank is sufficient to get to the nearest garage or filling station. Price \$1.50.

Cooper Manufacturing Company

430 South First Ave. - - Marshalltown, Iowa

Exclusive Sales Representatives, THE FULTON COMPANY, Milwaukee, Wisconsin

LIKUM Alarm Ignition LOCK



*"The horn Blows
and Scares the thief"*

Gives the Autoist Double Protection Against Theft

*By securely locking the ignition and automatically
sounding the horn if the car is tampered with.*

Type A
\$5.00

Chevrolet 1921-23
Essex 1923-26
Ford

Saves the Battery From Running Down

*If thru carelessness the ignition switch is left on when the driver leaves
the car the horn blows when the key is turned, giving a warning to
turn off the switch to save the battery.*

Type B
\$7.00

Auburn
Buick
Chevrolet 1924-26
Chrysler
Dodge
Essex 1921-23
Hudson
Nash
Etc.

**Car Dealers should take advantage of this real profit getter and install
the LIKUM LOCK on every car, new or old, which leaves their service
station.**

Installation is simple and inexpensive on every make of car.

Sold through the established jobbing and wholesale trade.

Manufactured by

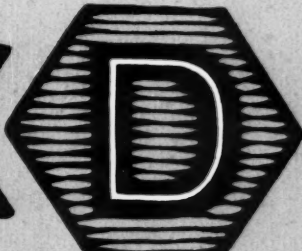
Loomis-Knight-Miller, Inc., Springfield, Massachusetts

Export Department—Jordan B. Parsons and Associates, Woolworth Bldg., New York City

**motorists
want**

**Greater
Riding
Comfort at
Lower
Cost**

Sell them

HEX**DEES**

You Can Sell **HEXDEES** for Spring Control

Because

a *Hexdees give greater riding comfort.* They employ an entirely new principle—spring control. They control BOTH down-thrust and rebound without impairing the normal action of the spring.

Hexdees apply their road, smoothing action to the big bumps and the little ones, too—instantly increasing or reducing their “three-point pressure” as the need demands. Control is kept within the springs themselves instead of tying the axles to the car body.

b *Hexdees prevent balloon galloping.* They counteract the rhythmic vibration known as galloping which is intensified by balloon tires. They definitely answer the balloon tire problem.

c *Hexdees can be installed in less than 30 minutes.* Simple in construction—a forging, two rollers and a set-screw—they are surprisingly easy to install.

d *Hexdees can be easily adjusted.* By merely tightening the set-screw Hexdees are adjusted to give exactly the right amount of pressure for each car.

e *Hexdees do not need servicing.* Once permanently adjusted they function without further attention. No parts to get out of order.

f *Hexdees never wear out.* Hexdees have no wearing parts. They need no lubrication. Dirt, dust and rust *never* interfere with their action.

g *Hexdees are made for every type of car.* Every car on the road can be equipped with Hexdees. Few sizes are required to meet the demand.

h *Hexdees are priced to fit all pocket-books.* Simplicity in construction means a startlingly low price.

Why Hexdees Offer You

Look at the Price: \$8.75 for Fords; \$14.25 to \$17.50 for other cars—less than half what motorists have usually had to pay for shock absorbers—less than half the cost for a device that does a double job.

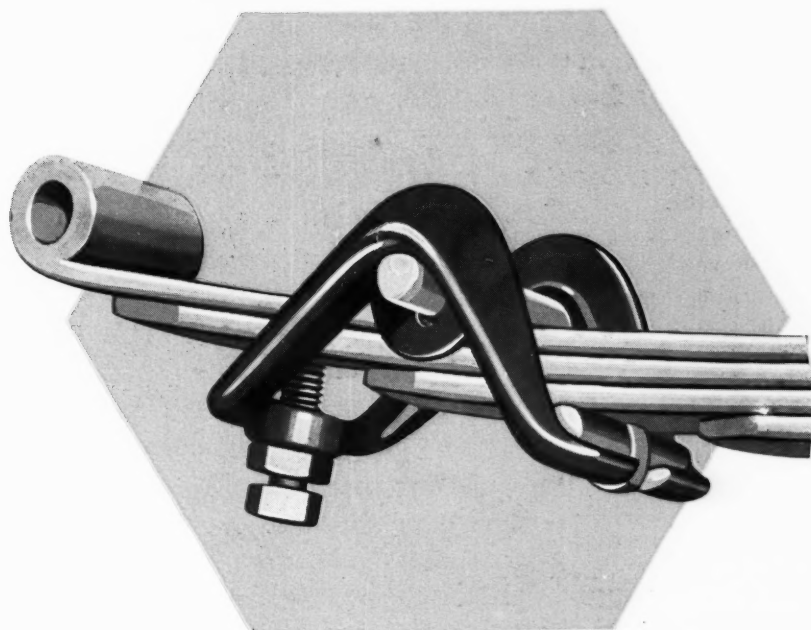
Convenient, Attractive Packages. Hexdees are attractively packaged in complete sets for every type of car. Easy to handle. Excellent for window and store display.

\$8⁷⁵

for Fords

\$14²⁵ to \$17⁵⁰

for other Cars



Developed and guaranteed by the makers of DETROIT SPRINGS:

DETROIT STEEL PRODUCTS COMPANY

"The world's largest manufacturers of automobile springs"—as the most practical and scientific way of controlling spring action and improving car riding comfort.

Large Volume Profits

Small Inventory. A complete stock—enough to fit all makes of cars—inventories at only a few dollars. No service stock of repair parts needed.

Quick Turnover. The unusual combination of large market, low price and small inventory makes for large profits from quick turnover.

A "Quick-Action" Market is Waiting →

A "Quick-Action" Market is waiting for

HEXDEES

Of all the cars in your territory more than half are not now equipped with any shock-absorbing device.

Eighty per cent of the cars in your territory are in the low and moderate priced class. The owners of these cars will buy HEXDEES; they will not pay the large price demanded for ordinary shock absorbers.

The owners of many cars now equipped with unsatisfactory shock absorbers are ready to replace them with Hexdees.

This tremendous market—old cars and new cars—expensive cars and cars moderately priced—thousands that are not equipped and many already equipped—this is the HEXDEES market in which aggressive dealers will make money.



On cars other than Fords HEXDEES are applied to both ends of each front spring and, with a few exceptions, to the rear end only of each rear spring. They are conveniently packaged in sets of six.



HEXDEES FOR FORDS are applied to both ends of both front and rear springs. They are put up in attractive boxes, each box containing a set of four units.

DETROIT STEEL PRODUCTS COMPANY, 2286 East Grand Blvd., Detroit, Mich.

Exchange this "BOX" for a Box of Hexdees

Fill in the coupon below. It will bring you a trial set of Hexdees. Use them for thirty days. If for any reason you are not satisfied with them, send them back and your money will be refunded.

HEXDEES

for Spring Control

Detroit Steel Products Company, 2286 East Grand Boulevard, Detroit, Michigan.

Please send me C.O.D.—at regular dealer discounts.....sets of Hexdees for demonstration on my.....car, model.....year.....

Name.....

Address.....

I am a

☐ Car Distributor handling.....cars

☐ Car Dealer handling.....cars

☐ Repair Garage Owner ☐ Service Station Owner.

Now a
TASCO
 Gasoline Gauge
 for the
CHEVROLET
 1926 Model "V"
 and All Models of STAR

TASCO gauges "Type K" for 1926 Chevrolets and "Type J" for all Stars are licensed under the Easy-on patent and made with the bayonet type connection to fit in place of the Easy-on filler-cap. They are beautifully made and finished in nickel—

To sell for \$1.50 Retail

Like all TASCO gauges, these new types are **guaranteed for the life of the car.**

More Ford, Chevrolet, Overland and Star owners will buy TASCO gauges this year than ever before.

Check up your stock and while ordering some of these new types "K" and "J," fill in other sizes to make a good complete stock.

The following types are made to

Sell quick at \$1.25 Retail!

Type "B"—Medium length, used on the oval tank for the Ford touring car and roadster.

Type "C"—Short length, square tank, used on the Ford sedan, coupe, and Chevrolet "490."

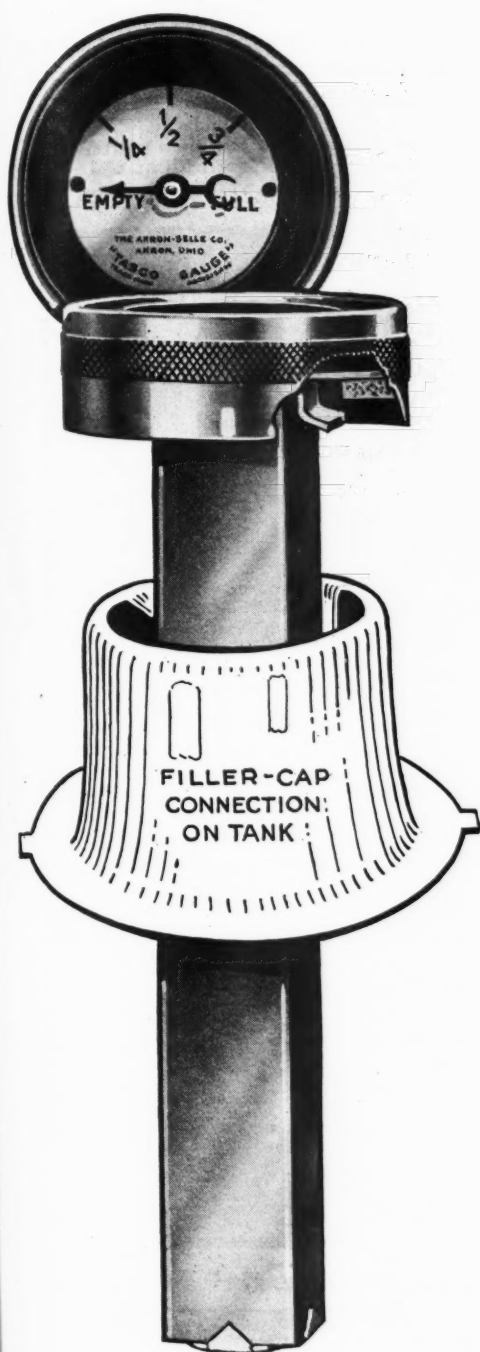
Type "E"—Used on all Chevrolet models except "490" and 1925 and 1926 models.

Type "F"—For 1925 Chevrolets.

Type "H"—For 1926 Ford roadster, touring, coupe and Tudor.

Type "O"—For all Overlands up to 1925.

Type "P"—For all model 91 Overlands except coupe-sedan.



*The New Bayonet Type
 Easy-on TASCO
 Gasoline
 Gauge*



The Akron-Selle Co.

"41 Years in Business"

Akron, Ohio

MAYDWELL & HARTZELL, INC.
 Los Angeles San Francisco
 PACIFIC COAST REPRESENTATIVES

*More TASCO Gauges are in use
 than any other kind.*

Order TASCO Gauges TODAY from your jobber

FROM THE STUDY
OF LIGHT COME
VICTOR LAMPS

Victorgrams

THERE'S A VICTOR
LAMP FOR EVERY
AUTOMOTIVE NEED

VOL. 1. NO. 9.

EDITED BY VICTOR LIGHT



"Boys, that lamp will sell!"

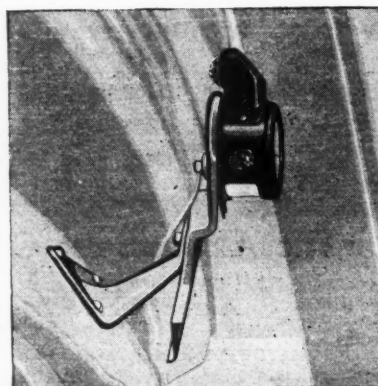
"That is absolutely the best driving lamp I have ever seen. Just see the width of that beam! It's the reflector that does it and that allows for a plain lens which lets out all the light. No visors, no adjustments, and did you notice how quickly Joe clamped it on!"

"If we can't put one on every car in the shop, my name isn't Clardy."



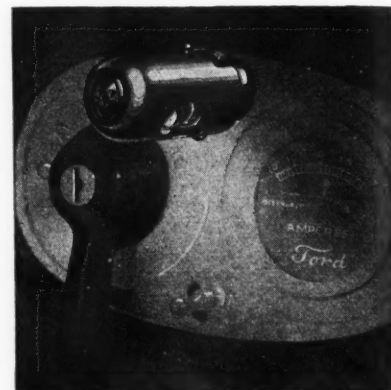
This is the new VICTOR Auxiliary Driving Lamp that caused even Clardy to enthuse. No. 73 in the Victor Line, Ditchlite by name. Finished in black and nickel. Victor Brown Universal Reflector gives extra wide spread of light, illuminating ditch and road. Plain convex lens. Easily mounted on any car. List price \$5.50.

Other New Victor Lamps



No. 46-G Parking Lamp for 1926 Ford cars which have tail lamp mounted on fender. It replaces the regular tail lamp shell. Tail lamp supplies white light by means of reflector through

the clear jewel at front, the red light through the ruby tail lamp lens. Jewel on side is green. Supplied with switch that installs without drilling. List price in nickel finish \$1.35.

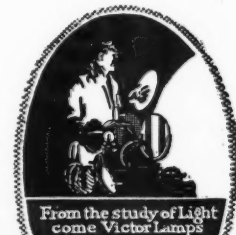


No. 21 Dash Lamp—"Binnacle." For 1926 model Ford cars. Installed without drilling holes. Looks as though it were built on the car. A green jewel in the end of hood gives smart touch of color. Operated by pressing in and turning. Finished in nickel. List price 75c.]

Write for new Victor Catalog TODAY. Use coupon below. Please check literature and information wanted.

Victor Lamps are sold through jobbers.

THE CINCINNATI VICTOR COMPANY
712-720 Reading Road,
CINCINNATI, OHIO



THE CINCINNATI VICTOR CO.
716 Reading Road
CINCINNATI OHIO

Send me items checked without charge.

"MOTOR VEHICLE HEADLIGHTING"
☐ A 28-page handbook thoroughly covering this subject.

ILLUSTRATED Circular describing VICTOR
☐ complete Light Adjusting Station Equipment and quote me special price.

☐ Latest Victor Catalog

NAME.....

ADDRESS.....

CITY OR TOWN.....

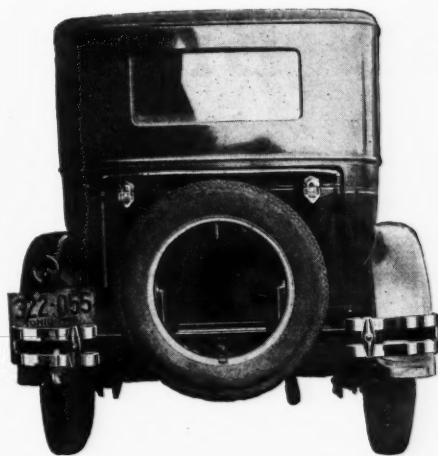
STATE.....

"BELLEVUE" TRUNK UNITS

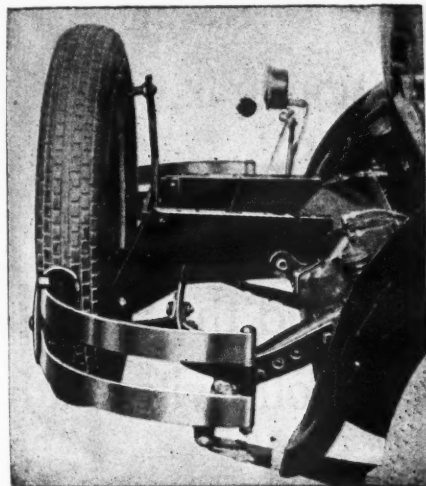
FOUR-IN-ONE-PATENTED

BUMPERETS — TRUNK CARRIER — TRUNK — SPARE TIRE CARRIER
Built Into One Complete, Well-Designed Unit

BUILT FOR ALL
POPULAR MAKE
CARS—Easily in-
stalled.



Designed with care—
to harmonize with the
car's appearance.



(Above illustration gives details of construction of Trunk Carrier Units)
PATENTED

Write for complete catalog of "Bellevue" Products.

Trunk Units, Trunks,
Bumpers, Bumperets,
Step Plates, Tire Locks,
Tow Ropes and Cables.

"Bellevue" Trunks

FOUR SIZES



Two Coat Baked Enamel—High luster finish

- No. 1—38" long, 8½" wide at top
18" high, 11" wide at bottom
- No. 2—38" long, 10½" wide at top
18" high, 13" wide at bottom
- No. 3—38" long, 12½" wide at top
18" high, 13" wide at bottom
- No. 4—40" long, 10½" wide at top
18½" high, 12¼" wide at bottom

ALL "BELLEVUE" PRODUCTS ARE GUARANTEED TO FIT AND GIVE SATISFACTORY SERVICE

"Bellevue" Bumpers and Bumperets

A variety of two bar and three bar styles from which to choose. Built to fit all popular make cars



THE BELLEVUE MANUFACTURING CO.
BELLEVUE, OHIO

Flat Rates and the Complete Line of McQuay-Norris Motor Parts Mean Bigger Profits



Remember

The best profits are in the best parts. Poor replacement parts can ruin a good mechanical job.

There's a big profit combination in flat rates and the complete line of McQuay-Norris motor parts. There are two profits in every job—the profit on the labor and the profit on the parts. You get them both with flat rates and McQuay-Norris parts.

To insure flat rate profits, buy the only complete line—McQuay-Norris piston rings, pistons, pins and bearings.

The Complete McQUAY-NORRIS parts line
PISTON RINGS-PISTONS-PINS-BEARINGS

McQUAY-NORRIS MANUFACTURING COMPANY. General Offices: ST. LOUIS, U. S. A.
Factories: St. Louis, Indianapolis, Connersville, Ind.; Toronto, Canada

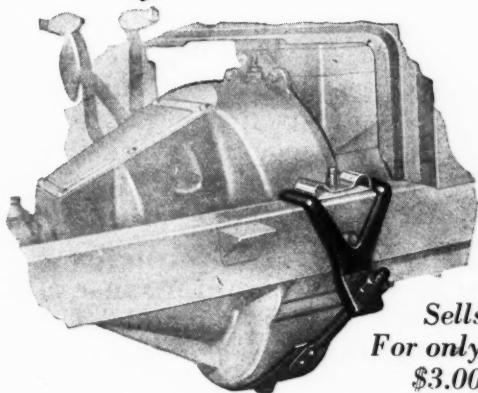


*When they
Drive In*

Sell a Pioneer Engine Support

What the Pioneer Does

-tightens Ford Chassis.
-eliminates Vibration.
-prevents Broken Crankcase Arms.
-sets Crankcase Arms already Broken.
-cuts Repair Bills.
-reduces Oil Leakage.
-keeps rivets and Bolts from Loosening.
-gives Smoother Running Engine.
-increases Riding Comfort.



*Sells
For only
\$3.00*

**FITS BOTH OLD
AND IMPROVED MODELS**



Every Ford owner instantly recognizes the value of a Pioneer Engine Support to his car. The strategic time to show the support is when they drive in for repairs or to have loose rivets and bolts tightened. They'll buy quickly and gladly. You can make a sale, take a liberal discount and install the support in a jiffy.

The Pioneer is a superior engine support in every way. It now has solid drop-forged two-fingered hangers. The two fingers take a firmer and wider hold on the frame making the support stronger and more rigid. Two fingers always grip better than one.

The Brewer-Titchener Corporation
108 Port Watson St., Cortland, N. Y.

Dealers:

If you are not already on our list, mail the coupon below and we will give you complete information about our attractive proposition.

The Brewer-Titchener Corporation
108 Port Watson St., Cortland, N. Y.

Please send me further information about the Pioneer Engine Support.

Firm name.....

Individual

Address

Burroughs

USED CARS

Simplified
Accounting
Plan Protects
Your Profits

GROSS
SALES

If the
tail is wagging the dog

If the used car problem is running your business, we have a plan which will help you conquer it.

The Burroughs Simplified Accounting Plan will show you every day the relation of your used car purchases to gross sales; your profit or loss daily on used car sales and whether your used car department is cutting too deeply into new car profits—and it will give these vital figure-facts in good time to avoid disaster.

Mail the coupon or phone the nearest Burroughs office and let us show you how this commonsense plan can be applied to your business. Thousands of car dealers are finding it invaluable.

Send the Coupon

Burroughs Adding Machine Co.,
6559 Second Blvd., Detroit, Mich.

Please send me more information
about your Simplified Accounting
Plan for Automotive Dealers.

Name _____

Business _____

Address _____

BURROUGHS ADDING MACHINE COMPANY, DETROIT, MICH.

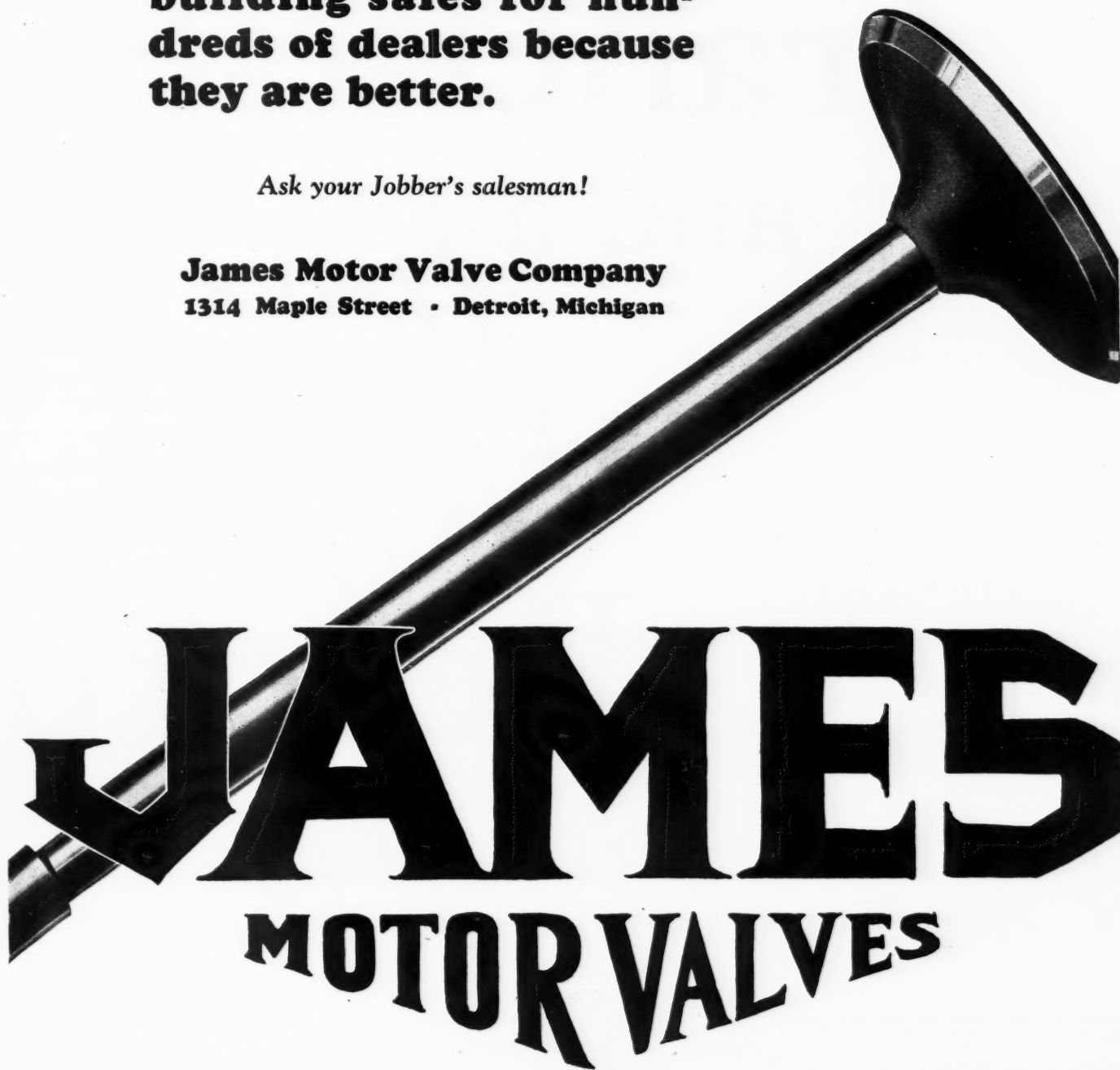
ADDING · BOOKKEEPING · CALCULATING AND BILLING MACHINES

The best way to make money on replacement valves is to sell a better valve—priced right—and you can't help but increase sales and profits.

James Motor Valves are building sales for hundreds of dealers because they are better.

Ask your Jobber's salesman!

James Motor Valve Company
1314 Maple Street • Detroit, Michigan





The
**Double Profit
Franchise**
and a *New*
**World's
Record**
!





DURING the first three months of its existence, more than 10,000 new Pontiac Sixes have been produced and sold—a record not even remotely approached by any other new make of automobile in the history of the industry.

And by mid-summer the number produced bids fair to exceed the best record heretofore made by any car during its first full year.

As only partial evidence of the value of the Oakland-Pontiac selling agreement, this fact should have definite and emphatic meaning to every progressive and ambitious dealer.

Acquiring this double franchise, he not only participates in the sensational sales success of the Pontiac Six but he also has the

very vital advantage of handling the Oakland Six, a combination which enables him to meet every buyer preference from \$825 to \$1295 with a Six of outstanding value.

And in addition, he operates under an agreement which offers terms and discounts that are now definitely accepted by the trade as an assurance of permanent prosperity.

You may have a general idea of what the Oakland-Pontiac Double Franchise comprises—but only thorough investigation will reveal its sales possibilities and its opportunities for profit today and in the future. Write now for complete information!

OAKLAND MOTOR CAR COMPANY
Pontiac, Michigan

OAKLAND SIX

COMPANION CAR TO

PONTIAC SIX



DODGE BROTHERS

offer the Budd-Michelin Wheel as standard equipment

THIS is an outline of history . . . history that has made a stronger, safer, more convenient, more beautiful automobile.

That affects the welfare of millions of people . . . so it's real history.

Back in 1921 Dodge Brothers gave their customers a chance to ride on Budd-Michelin Wheels . . . offered these steel wheels as optional equipment on all models, at an extra cost of \$35 to the buyer.

Eight thousand Dodge buyers took advantage of the offer that year.

The next year, 30,000 buyers did the same thing.

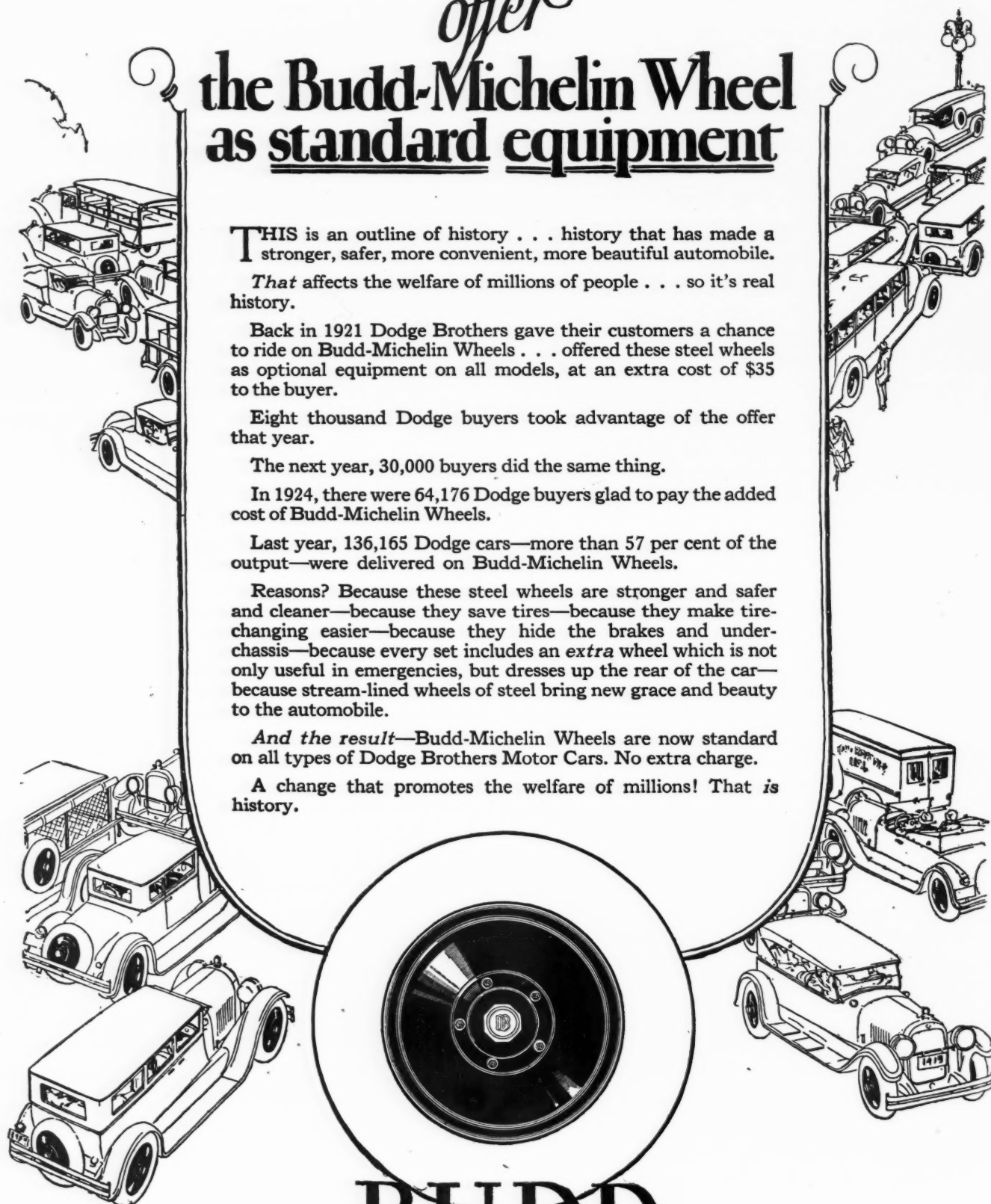
In 1924, there were 64,176 Dodge buyers glad to pay the added cost of Budd-Michelin Wheels.

Last year, 136,165 Dodge cars—more than 57 per cent of the output—were delivered on Budd-Michelin Wheels.

Reasons? Because these steel wheels are stronger and safer and cleaner—because they save tires—because they make tire-changing easier—because they hide the brakes and under-chassis—because every set includes an *extra* wheel which is not only useful in emergencies, but dresses up the rear of the car—because stream-lined wheels of steel bring new grace and beauty to the automobile.

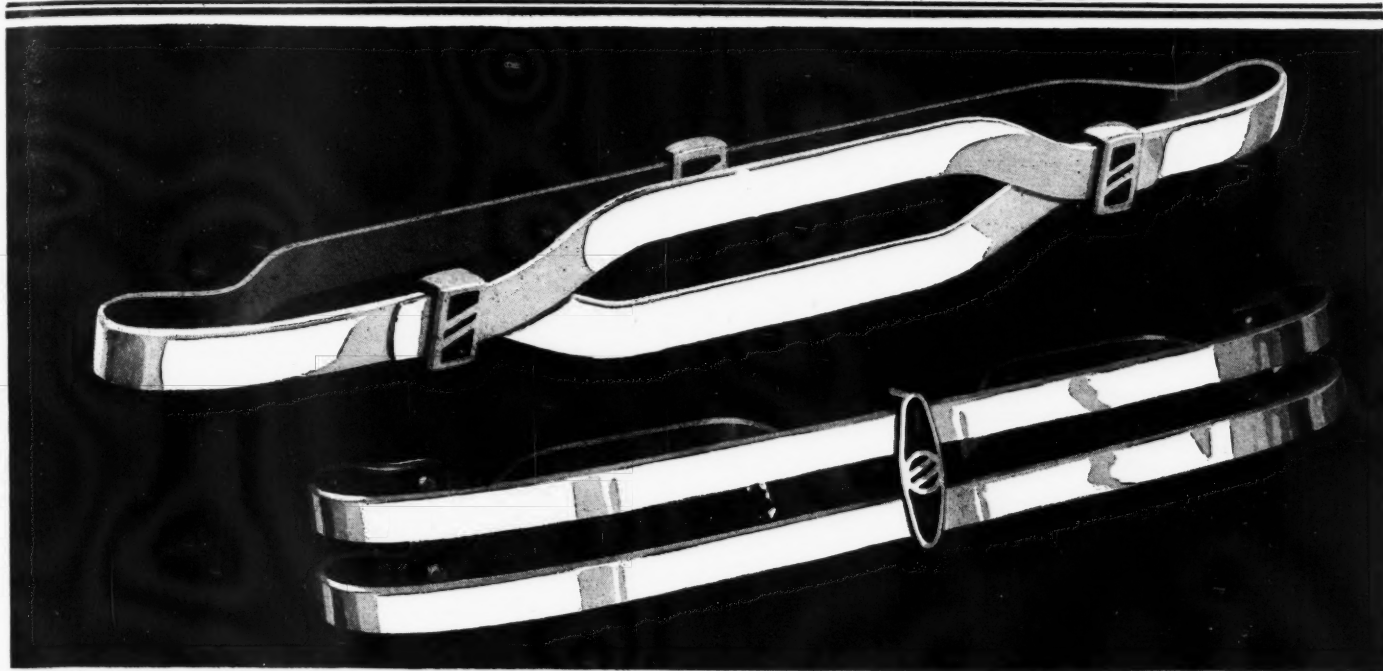
And the result—Budd-Michelin Wheels are now standard on all types of Dodge Brothers Motor Cars. No extra charge.

A change that promotes the welfare of millions! That is history.



BUDD

WHEEL COMPANY
Detroit and Philadelphia



Leading Motor Car Engineers Endorse Biflex

Why do you suppose the *best* motor car manufacturers are equipping their cars at the factory with Biflex Bumpers? Because these manufacturers, fully realizing the vital importance of safeguarding their cars and those who drive them, have subjected bumpers to rigid laboratory tests and found Biflex *Cushion* Bumpers to give the *utmost bumper protection*. Any dealer anywhere can equip his cars with these same bumpers which factory engineers have endorsed.

73
THE BIFLEX CORPORATION
WAUKEGAN, ILL.

Subsidiary: The Halladay Company, Decatur, Ill.

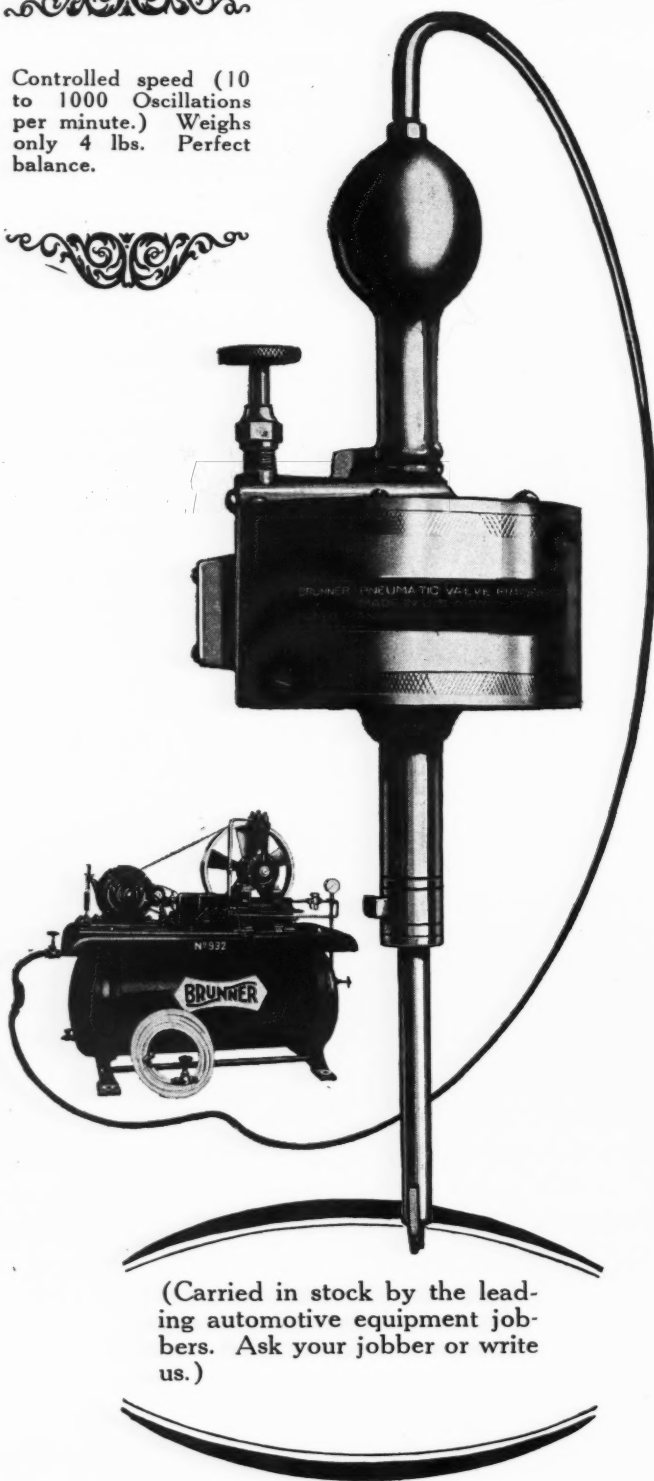
Biflex Cushion Bumper

Halladay Bumpers also are Biflex Built

Valve Grinding by Air

Quicker, Cheaper, Better

Controlled speed (10 to 1000 Oscillations per minute.) Weighs only 4 lbs. Perfect balance.



(Carried in stock by the leading automotive equipment jobbers. Ask your jobber or write us.)

The days of slow hand grinding and finishing are gone forever. The modern shop demands faster methods. Compressed air supplies them.

The Brunner Air Operated Valve Grinder running at variable speeds ranging from 10 to 1000 oscillations per minute does the job in less time, at lower cost, and with better results than any other equipment.

More, its perfect balance and light weight permit continuous operation without tiring the operator. This makes a lot of difference when you are working on a flat rate basis where every minute saved means money ahead. Write for new folder "Valve Grinding by Air." Be ready for those summer overhauls. The time is growing near.

BRUNNER MFG. COMPANY
Utica, N. Y.

Cincinnati, O.

Kansas City, Mo.

San Francisco, Cal.

Toronto, Can.



Pneumatic Valve Grinder

For
Complete
Check-up

STEVENS PISTON ALIGNER



NO matter how conscientiously you work on the engine block you can't come through with a clean job unless you get perfect piston alignment. Guesswork and near-accuracy won't do. Engine performance depends on absolute accuracy—from the top of the piston right down to the lower end of the "con" rod.

With the Stevens Aligner you get true alignment of every part of the assembly, with relation to every other part—and a check-up both before and after assembly that insures factory precision. No other aligner gives you this assurance of complete accuracy.

You'll find numerous exclusive features in the Stevens Aligner—the Quick-change Arbor Clamp; Interchangeable Arbors, rugged enough for test-fitting; the Centering Gauge; the perfected "Sea Lion" Indicator, etc.

T-100—Universal Model with 1 Arbor, \$20

T-103—Universal Model with 8 Arbors,
1 1/4 to 2 1/8" \$40

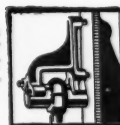
Extra Arbors, any size \$3.10

A valuable, new service handbook on Stevens "Speed-Up" Tools has just been issued in convenient pocket size. Send us the name of your shop foreman and mechanics, and we'll mail them each a copy. Ask for handbook No. 18.

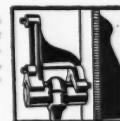
"Thru your jobber—
his service is economy."

Stevens & Company
375 Broadway 1438 S. Mich. Blvd.
NEW YORK CHICAGO

"Sea Lion" in position for correcting bends in connecting rod.



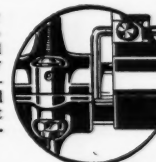
The "Sea Lion" is here shown checking connecting rod for twists.



Connecting rod bearings are test-fitted on arbor.



Centering Gauge insures final accuracy by checking central alignment of connecting rod.



Tapered pistons are checked by feeler gauge readings.



**Largest
Line of
Special
Automotive
Tools**

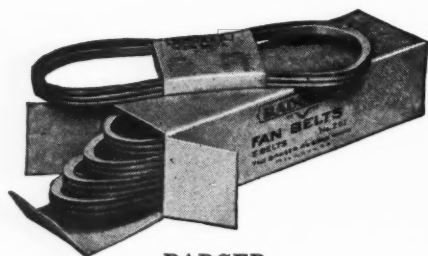
Stevens

**SPEED
UP**

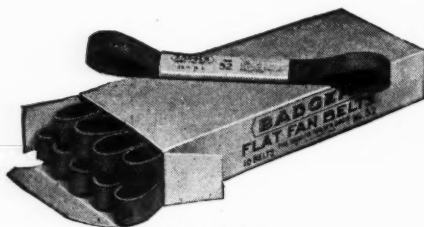


Tools

TRADE MARK



BADGER
Cord Center
"V"-Type Fan Belts



BADGER
Straight-Line Fabric
Flat Fan Belts



BADGER
Radiator Hose
3-ply Fabric—Red Cover
3-ft. Lengths



BADGER
Ford Hose Connections
Red Cover—Fabric
Fibre—Black



BADGER
Tire and Tube Repair Kit



BADGER
Tube Quick Repair Kit
Standard and Junior Sizes



BADGER
Tube Repair Kit
Shop Size



BADGER
All Cord—Gum Coated
Tire Plaster—4"
Counter Display

"V" Type Fan Belts

Flat Fan Belts

Radiator Hose

Ford Hose Connections

Tire and Tube
Repair Kits

Tube Repair Kits

Shop Repair Kits

Tire Plasters

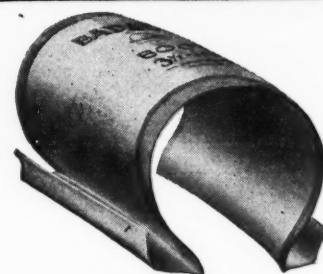
Blowout Boots

Patching Cement

Moulded Flaps

Flexible Disc
Couplings

Generator Tubing



BADGER
Fabric Blowout Boot

PRESENTING

BADGER

Automotive Rubber Accessories

THE completeness of this line of Automotive Rubber Accessories will at once be apparent from a study of the illustrations shown on these pages.

Whatever the requirements of the Trade may be, whether for Tire and Tube Repair Kits, in various types and sizes, Emergency Patches, Tire Plasters, Blowout Boots, Fan Belts, of various sizes and types, Radiator Hose and Connections, Repair Cements, etc.,—the demand may satisfactorily be met with the BADGER Line.

And in every feature of the line, QUALITY predominates, reflecting the high standing of the factory behind it. Furthermore, in price it is quite consistent, at the same time providing a substantial margin of profit to the Trade.

Factory distribution is effected solely through the Wholesale trade, and through which channel the Dealer trade is being served.

Requests for prices, samples, etc., from established Wholesale Distributors will receive most prompt attention.

THE BADGER RUBBER WORKS

MILWAUKEE, WISCONSIN



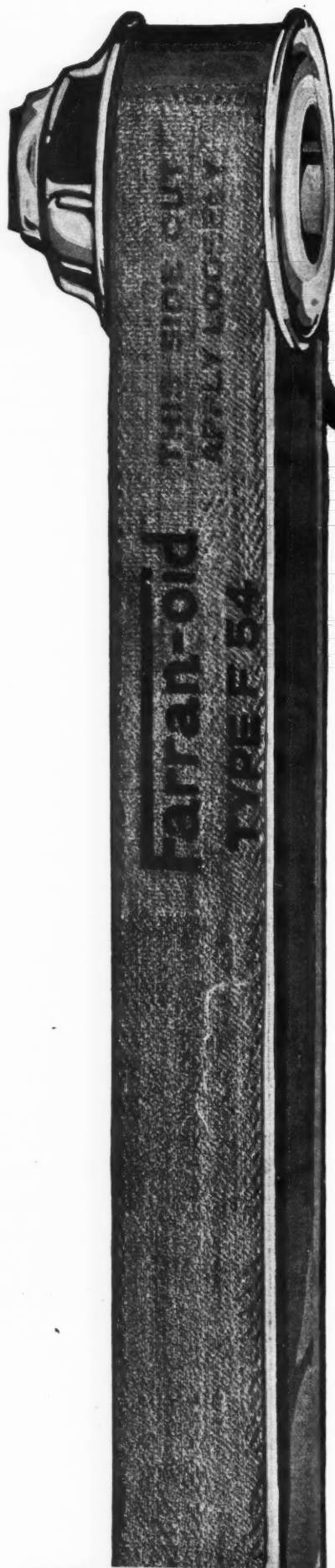
BADGER
Air-Drying
Solvent Repair Cement



BADGER
Tire Flaps
Individual Sizes 100-Foot Rolls



BADGER
Universal—Generator—Magneto
Flexible Disc Joints



A fan belt that really **Grips** *the pulley*



That's Farran-oid.

It has tremendous strength.

Due to the flexibility of the tape backbone and the high grade cover we employ, the belt literally wraps itself around the pulleys.

No danger of overheated motor due to slipping fan belt. Farran-oid Fan Belts are also heat, oil and waterproof. They won't stretch. They are very long-lived.

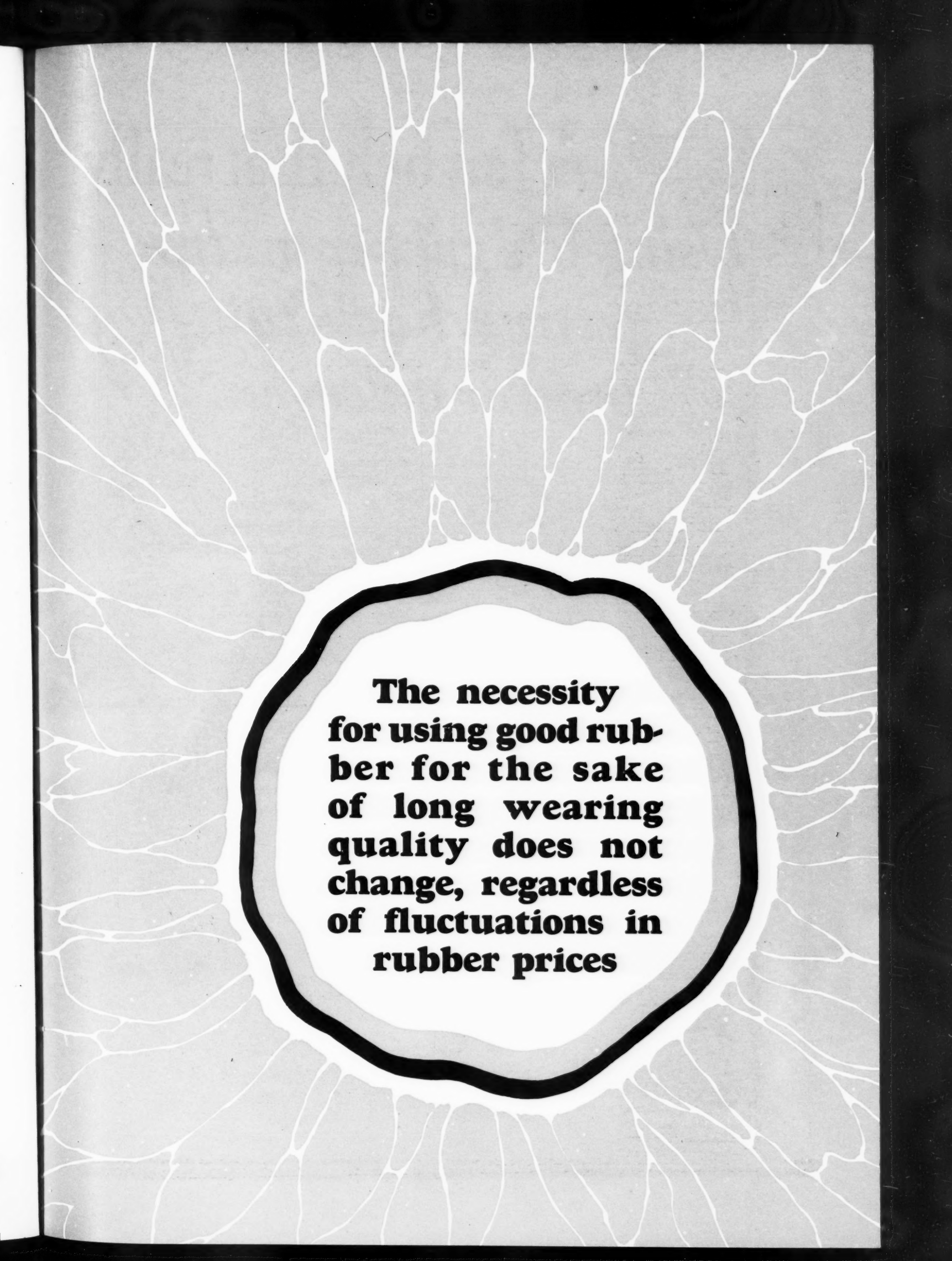
Dealers like to sell Farran-oid. They know in advance the long satisfactory service they will give. They build good-will and permanent trade for you.

*Two types — Herringbone Flat Endless
or Dual-flex Molded Cable V-type*

THE FARRAN-OID COMPANY, Akron, Ohio

Farran-oid *Products*

Fan Belts—Radiators Hose—Garage Air Hose
— Car Washing Hose — Tire Flaps — Blowout
Patches — Tube Patches — Ford Floor Mats



**The necessity
for using good rub-
ber for the sake
of long wearing
quality does not
change, regardless
of fluctuations in
rubber prices**

Using less rubber means getting back to pre-war mileage

BY W. O'NEIL, PRESIDENT OF THE GENERAL
TIRE & RUBBER COMPANY, AKRON, OHIO

MUCH has been printed recently about the high price of rubber and the necessity for rubber conservation. This news has not only given the public an exaggerated idea of tire prices but has supported the claim that rubber can be saved by using less of it in a tire.

When rubber is cheap tire manufacturers generally use more of it. The necessity for using the same quantity of good rubber for the sake of long wearing quality does not change regardless of fluctuations in rubber prices.

The growing practice of replacing a considerable part of the good rubber in tires with reclaimed rubber means getting back to pre-war mileage with greater cost to the con-

sumer in money and annoyance.

You can't save rubber by using less of it. The substitution of cheaper compounds for one-third of the pure rubber reduces the cost several dollars but, by weakening the entire structure, takes out two-thirds of the wear.

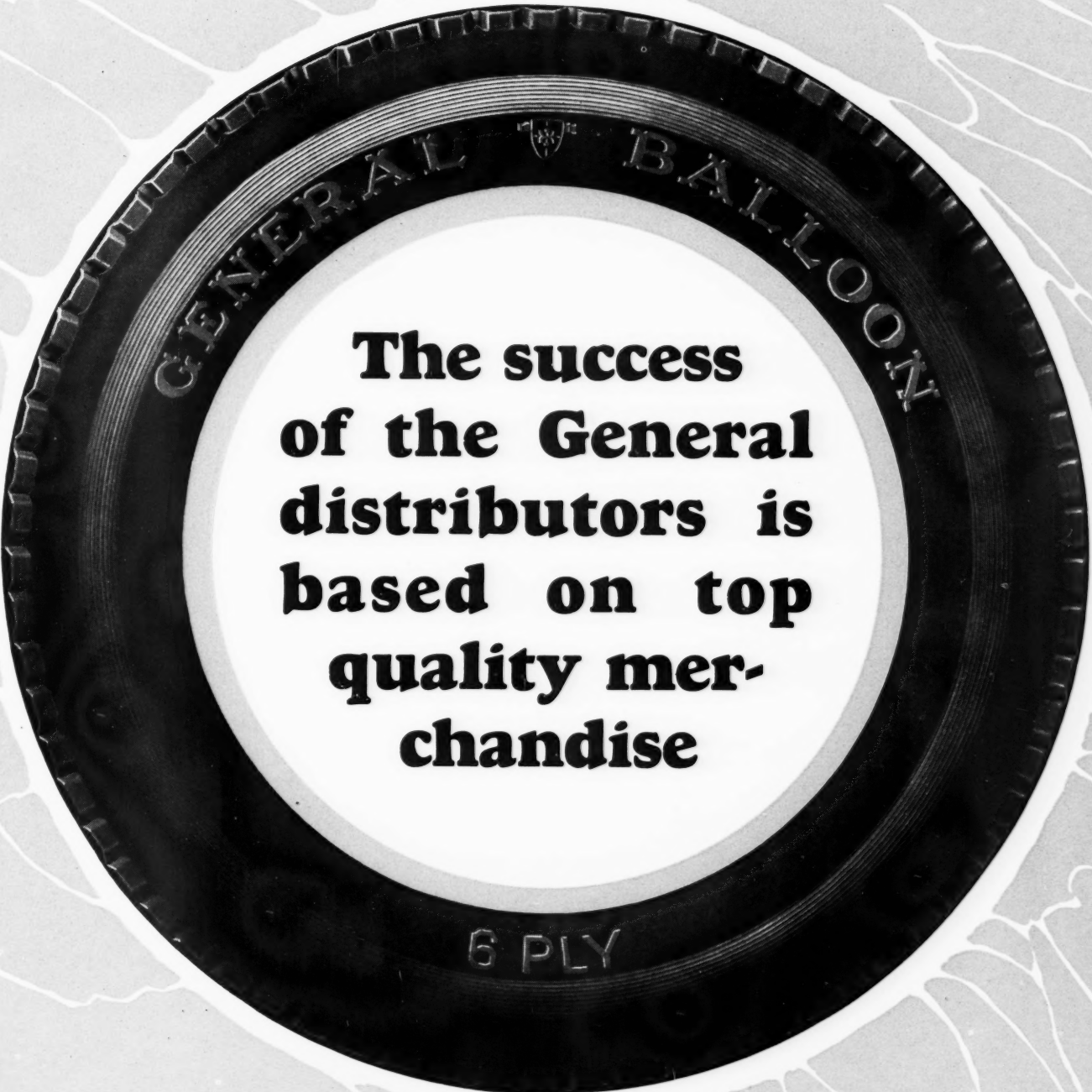
Everyone knows what happens when cement is saved by the use of more sand in the batch. The principle is the same whether it is tires or towers that totter. The way to save rubber is to make tires wear longer by using enough of it.

With plenty of good rubber it is unsound manufacturing and poor service to the public to use less of it in tires.

*It's the second 10,000 miles
that makes the big hit.*



*This full page advertisement appears in The Saturday Evening Post,
The Literary Digest, Collier's and Forbes Magazine.*



**The success
of the General
distributors is
based on top
quality mer-
chandise**



**It's
the *second*
10,000 miles
that makes
the big
hit**



Collect on the Cores

Rewound by Fredericks, as Dependable as
New Armatures . . . And Doubly as Profitable

WASTE yesterday! But today a burned-out armature represents a definite profit for thousands of men alive to the new opportunity in armatures.

A winding may be ruined. Yet the core is as good as new! Fredericks rewinds these equal to new cores with *new* wire, boils them in *new* varnish, insulates with *new* material. So that a Fredericks Rewind is as dependable as a *new* armature. It is given the same guarantee.

But your profit on a Fredericks Rewind is far greater. A new Ford starter armature lists at \$5.50. A Fredericks Rewind costs but \$1.50.

Prices on all other types are in proportion. Whether you sell, repair or service. . . . Get this added profit.

When the next burned-out armature comes in—Will you try a Fredericks Rewind? Simply mail the old armature to Lock Haven. The same day it arrives we will mail a Fredericks Rewind to you.

And now, too, dealers everywhere are stocking Fredericks Rewinds to give still quicker service. The coupon brings complete details on both types of Fredericks service, absolutely free. Use it now.

FREDERICKS *Rewinds*

**MAIL
TODAY!**

H. M. Fredericks Company, Lock Haven, Pa.
Gentlemen:

Send me today a price list and complete information on Fredericks Rewinds.

Company Name.....Writer's Name.....

Address

A Step Ahead in Merchandising Tire Chains

The easier you make it for customers to buy tire chains, the easier it is to sell them. That is a fact. It has been proved in practice.

Even if WESCO Tire Chains were no better—even if they had none of their important improvements—it would be easier to sell them in neat, attractive cartons from a shelf where customers can walk up and want them.

Every driver **knows** that he needs tire chains. The trouble is that when he remembers, he's usually somewhere out on the road.

A WESCO stock reminds him when he's at your counter—where you make your sales.

Drop us a line and let us tell you more about merchandising tire chains. They're easy to sell.

Western Chain Company
Chicago, U. S. A.



Dealers Are Enthusiastic
About This Better Pack-
age for a Better Chain.



A PREDICTION

One of the leading tire merchants in Connecticut recently told us that he was looking forward to selling more tires this year than ever before.

"I think this is going to be one of the biggest years in the industry," said this merchant "and to back up my judgment I am stocking more heavily with Fisk Tires than ever before."

Have you sufficient Fisk stock on hand to meet the summer demand? Make sure that your supply of Fisks is large enough to take care of your regular customers and new customers that have been created for you through Fisk advertising.



Time to Re-tire
Get a FISK
TRADE MARK REG. U. S. PAT. OFF.

There are 148 Fisk Wholesale Branches maintained to give you immediate action on orders and requests for service.

The Fisk Tire Company, Inc.
Chicopee Falls, Mass.

FISK

TIRES

GATES BELTS

"The Standardized Fan Belt"



FIG. 1.

Ordinary fan belt. Threads run lengthwise and across. To break this belt on the marked line only the lengthwise threads need be broken.

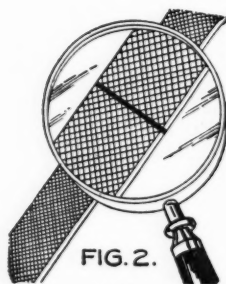


FIG. 2.

Gates Vulco Belt. Threads run diagonally. To break this belt every thread both lengthwise and across must be broken. This bias weave construction is patented.

These interesting diagrams tell the whole story of why the Gates Vulco Belt is bringing a lot of pleased customers back to your store.

Made by the World's Largest
Manufacturers of Fan Belts.

Costs You Less - to Handle Gemco Products



Gemco SHOCK ABSORBERS

Less capital tied up in stock—quicker turnover—more real profit. Only one size needed—easily adjustable, fits all cars, all weights.

Exclusive cam lever principle gives Gemco perfect proportionate control, unequalled riding comfort. Lightning speed of the Gemco at beginning of car spring compression and at recoil gives perfect spring control. Smooth action.

Sealed case keeps out mud, water, dust, ice—all-year efficiency. Self-lubricated.

Write for literature fully explaining Gemco advantages.

GEMCO MANUFACTURING COMPANY
760 So. Pierce Street MILWAUKEE, WIS.

Gemco BUMPERS

Concentrate on Gemco Bumpers. A complete line—dependable protection for all cars. We build Gemco Bumpers complete—temper the steel ourselves, use a nickel-plating process that produces a lasting finish. Highly developed brackets, fit all cars.

Gemco Bumpers get the business. Well known, moderately priced. Volume sales with the minimum investment. Write for catalog.



America's First
Automobile Bumper

Permanent Exhibit: Automotive Mart
1315 So. Michigan Avenue Chicago

"He Got



Check —
Thompson
distributors
also handle
Thompson
Bolts and
Starting Cranks
(More profit for you)

The same Thompson
Valves and other products
that are sold for replace-
ment are used as original
equipment on the finest
automobiles, airplanes,
trucks, tractors and motor-
cycles, including many for-
eign makes.

the Point Right Away”

So said an Iowa garage proprietor, in telling us how he sold Thompson Valves to a car owner.

THIS garage man's sales plan was something like this:

First, he handed the customer a Thompson Valve and a cheap competitive valve.

Then he said: "One of these valves will stand engine temperatures that will burn up, warp or otherwise ruin the other one in a short time. Naturally, it requires much less regrinding and carbon removal and keeps your engine right up to its best all the time. On the other hand, regrinding a poor valve or an old, worn-out one is only a temporary help. Your engine soon be-

gins to lose its pep again and has to go back to the shop for another regrind. Which do you want?"

As the garage man said, "He got the point right away." He doesn't have to tell the average prospect which is the Thompson Valve—its appearance tells the story.

Leading jobbers in all parts of the country carry Thompson "S" and "V" Valves for the replacement trade. In ordering from your jobber be sure to mention Thompson Valves by name.

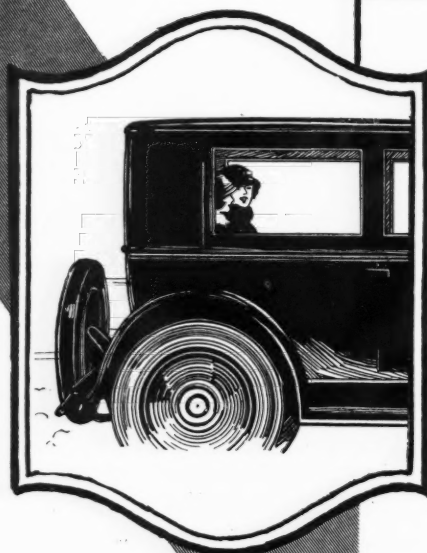
THOMPSON PRODUCTS, INC.

General Offices: Cleveland, Ohio, U. S. A.

Factories: CLEVELAND and DETROIT

Thompson

Silcrome Valves



Harvest Time—Now

Right now is harvest time in automobile sales. People buy in the spring to get the benefit of a full season. Accessories that will contribute comfort are easiest to sell when a new car is purchased.

The purchaser is interested in protecting his investment. Being shown the advantages of any particular safeguard, he is naturally very apt to purchase it without hesitation.

Burd-Gilman Shock Absorbers ease the rebound almost to the point of non-existence. Mechanically perfect, fully guaranteed, they assure the maximum of riding comfort—they safeguard the investment by eliminating the vibration and jolts which loosen nuts and bolts. Repair bills are kept to a minimum; the life of the car is prolonged.

The Burd-Gilman Shock Absorber Franchise is both a profit and goodwill builder. Write for prices and discounts.

BURD HIGH COMPRESSION RING CO.

Makers of the Famous Burd Piston Rings
ROCKFORD ILLINOIS

KEEP YOUR SEAT WITH

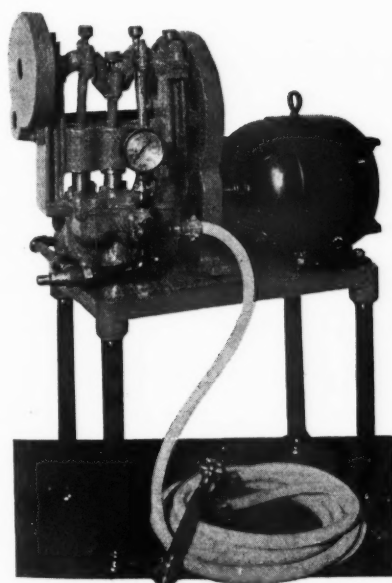
BURD
GILMAN
SHOCK ABSORBERS



Washing with a CHICAGO CAR CLEANER Gives a Better Job and More Profits



**Net Cost Below \$300
for the Best Performing Washer Built**



*"The Standard Automobile
Washing Machine of the World"*

The Chicago Car Cleaner, in the hands of any ordinary unskilled washer, will thoroughly clean any car or truck in 15 minutes—and will do an A-1 job. That means just one big thing for you—more washing, more profits. And it brings your customers back.

Note the price. You can pay for the outfit in extra business. Our guarantee protects you.

Ask Us About Our "Club Plan of Purchase" and Save More Money

—on the most convenient and thorough car cleaner. Body and chassis spray controlled through one patented adjustable nozzle. Washes every part of the car clean. Assembled in one unit. Stands anywhere in the building. Operates faster and more thoroughly. Ready to go as soon as city water and electric current are turned on. No extra equipment. Positively guaranteed.

For every shop—large or small. Big enough and cheap enough for both. Every installation is an instant success.

Write for complete details about Chicago Car Cleaner Profits. We can only suggest them here.

Car Cleaning Company
5334 Broadway Chicago, Illinois

Building Compressors of Finest Quality



Model B Air
Cooled Curtis
Compressor.

There are many styles and models of Curtis Compressors, but all of them are built to the same high standard of quality. Your air supply is only as dependable as the compressor, and Curtis, realizing this, insists on compressors of utmost reliability. Thus, Curtis has maintained front rank in the manufacture of pneumatic machinery for automotive uses.

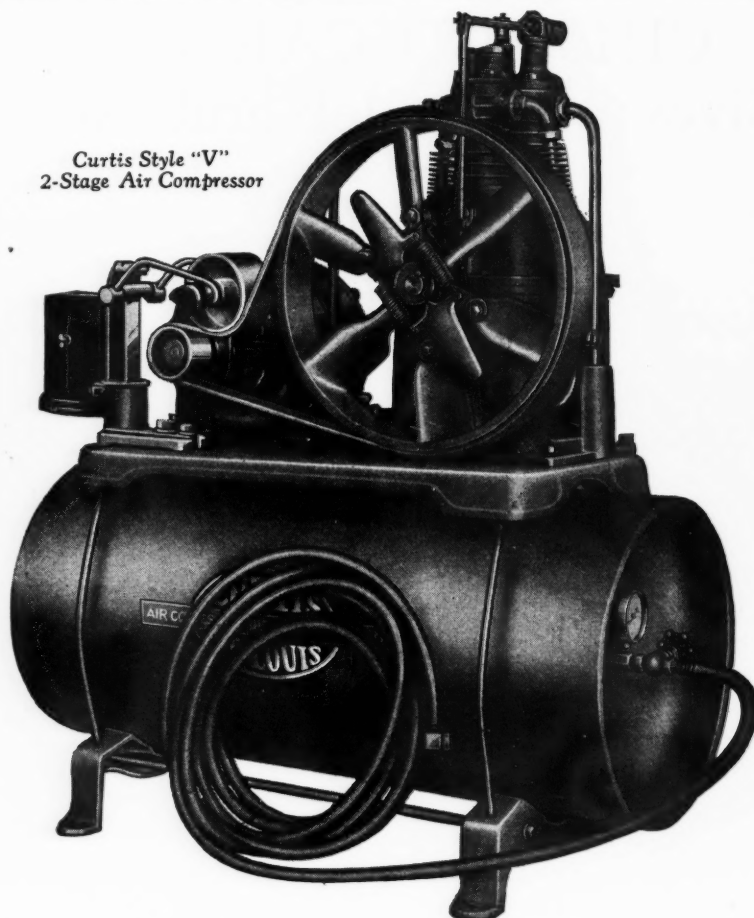
Curtis Air Stands



Curtis Column
Type Air and
Water Stand

Curtis Air Stands are made in two styles, column and low type. They are not only the handiest stands for your tire inflation line, but they also greatly improve the appearance of your station or garage.

Curtis Style "V"
2-Stage Air Compressor



Never-Failing Air Supply

Every Curtis Compressor is *engineered*, not merely built. Rigid standards of design and manufacture are strictly enforced. That's why Curtis Compressors are so unfailingly reliable.

In the automotive industry, Curtis Style "V" Compressors for tire inflation lines have become practically standard. "If you want the best, get a Curtis," has become an axiom to garage and filling station owners.

Ask any man who owns a Curtis Compressor [and there are thousands of them], what he thinks of his compressor. Once a Curtis user, no other compressor will satisfy you.

You need the unfailing Curtis reliability. It is your assurance of dependable air supply. Send the coupon below for full free information. Do it today.

Curtis Pneumatic Machinery Co., St. Louis, Mo.

1854 - Seventy two years - 1926

CURTIS Pneumatic Machinery Co.
1957 Kienlen Ave., ST. LOUIS, MO.
518-U Hudson Terminal, New York City

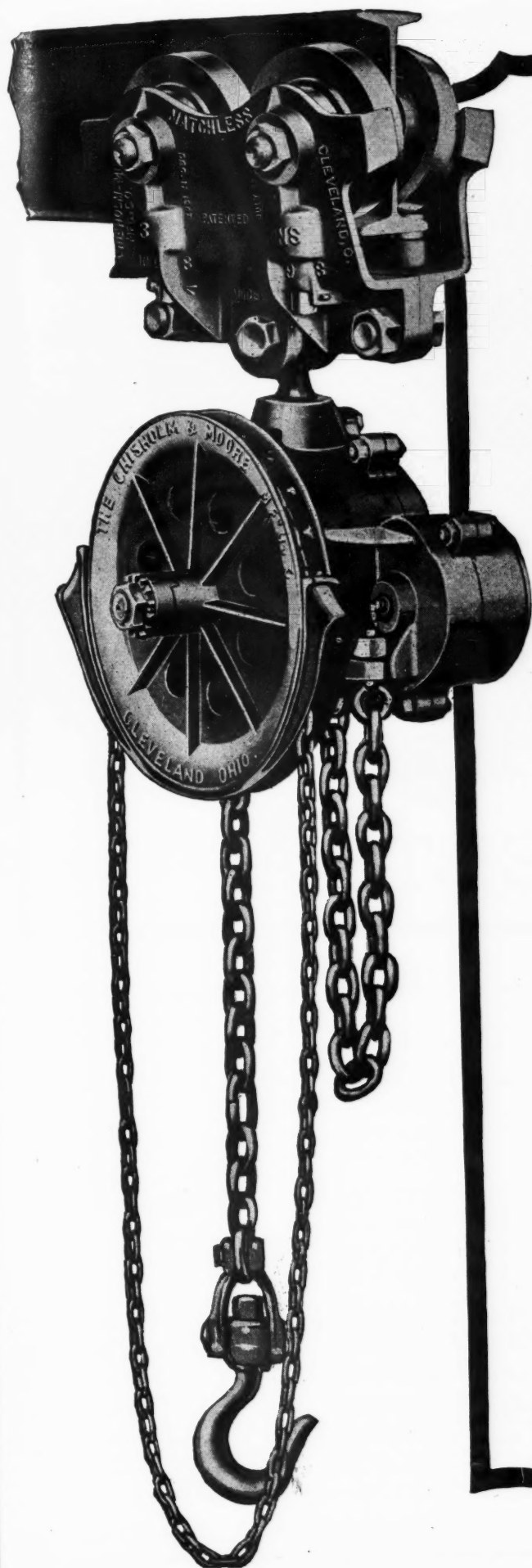
Please send me full free information about
Curtis Air Compressors.

Name..... City.....

Address..... State.....

☐ Send information about Air and Water Stands.

CURTIS
COMPRESSORS-HOISTS-CRANES
AND AIRMIST CAR WASH SYSTEM



Guaranteed Performance!

"CYCLONE" Hoists and "Matchless" Trolleys stand entirely on their merits. Their proven performance makes possible guaranteed performance. The following offer is convincing proof that these unbeatable material handlers are built to deliver the goods!

GUARANTEE

"Cyclone" Hoists and "Matchless" Trolleys are backed by a one year guarantee against defects in workmanship and material.

Exclusive features of construction place "Cyclone" Hoists and "Matchless" Trolleys in a class by themselves. And that's no idle boast! For instance—

"Cyclone" Hoists have the exclusive gyrating principle of operation whereby more than twice the usual number of lift gear teeth are always in mesh. Results? An easier moving, high-speed hoist with a minimum of friction and an exceptionally long life.

"Cyclone" Hoists have the exclusive single unit principle of construction which means that sizes are increased by increasing each part, thereby eliminating the objectionable method of obtaining larger sizes by doubling up on smaller sizes. Result? The same simple compact construction in all capacities of "Cyclone" Hoists.

"Matchless" Trolleys have Flangeless Track Wheels, an exclusive, patented feature. Result? No binding or scraping on edge of beam. Trolley moves freely around curves.

"Matchless" Trolleys have Timken Tapered Roller Bearings which take up all end and radial thrust so apparent in other I-beam trolleys. Result? Friction is minimized and axles and frame are protected from wear.

Every other detail of construction of "Cyclone" Hoists and "Matchless" Trolleys represents the best engineering practice. For complete information get in touch with the "C-M" representative in your territory. If you don't know where to locate him write us direct.

TO THE TRADE

Remember that "C-M" products are safe to sell because they are safe to buy. "C-M" representatives are backed to the limit on sales co-operation. Your inquiry will receive prompt attention and be held in strict confidence. Write.

**THE CHISHOLM-MOORE
MANUFACTURING COMPANY**

Branches: New York Chicago Pittsburgh
Representatives in All Territories for Immediate Service

CHISHOLM-MOORE

OVERHEAD

HOISTS
CRANES
TROLLEYS

TRACK SYSTEMS



Year Round Sales

Rie Nie
Trade Mark Reg.

FAN BELTS

There are no long periods of idle stock with Rie Nie Fan Belts. No hold-over from one year to another. Replacements are continuous—profits are steady.

Better fan belts than Rie Nie are not made. It's gratifying to know that each customer who leaves your store with one is a customer well satisfied. Rie Nie quality sees to that! These better-made belts are constructed scientifically of rubber saturated fabric, strong and durable—they are oil, heat and water-proof—ready for a long life of dependable service.

The investment in Rie Nie Fan Belts is moderate because fewer sizes are needed to service all cars. A liberal profit margin is allowed.

The summer touring season presents great sales possibilities. Suggest to your customers the idea of carrying a spare fan belt. It's good judgment and the cost is conducive. It will double your fan belt sales. If your jobber can't supply you, write us direct.

DURKIE & ATWOOD CO.
MINNEAPOLIS, MINN. U.S.A.

Manufacturers since 1910 of quality automotive products that SELL.
RIE NIE AUTOMOTIVE PRODUCTS

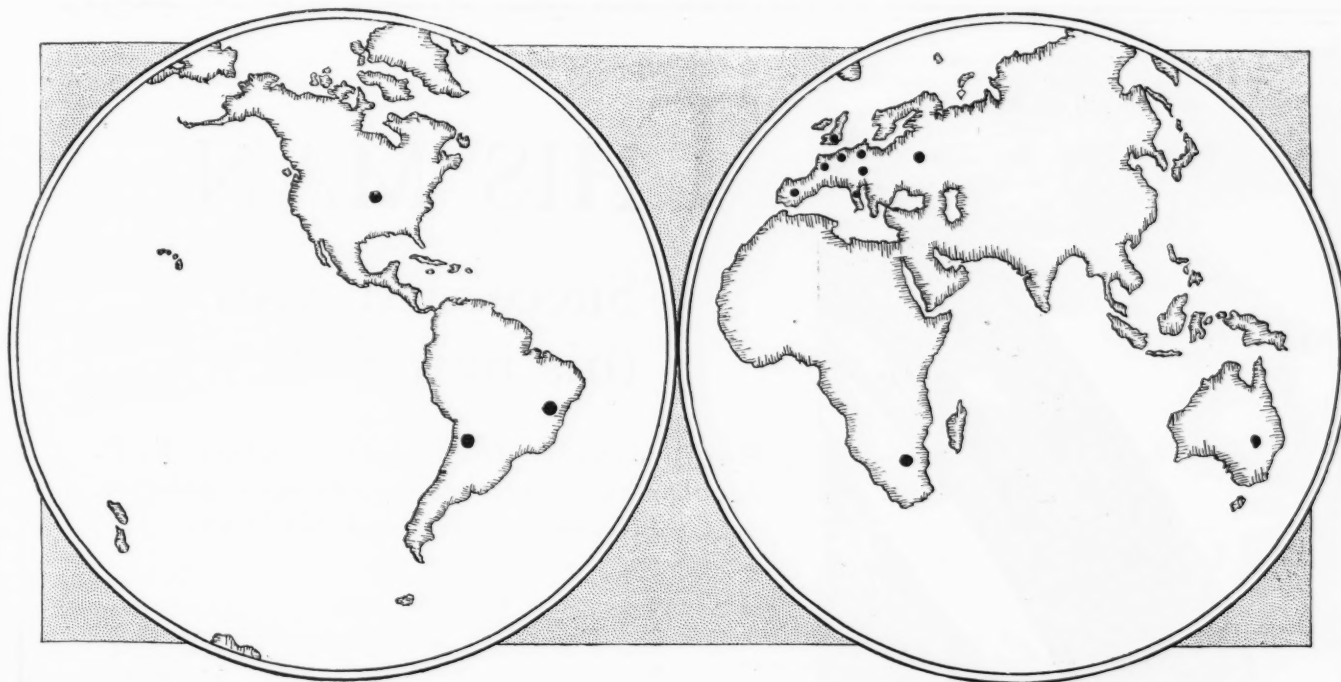
Air Brakes
All in One Dressing
Battery Paint
Bearing Glue
Blowout Patches for Balloon
and High Pressure Tires
Clutch and Brake Compound

Cowl Ventilator Gaskets
Enamel (Air Drying)
Enamel (Rub On)
Fan Belts
Friction Tape
Gasket Cement
Gasket Shellac

Graphite (Flake and Powdered)
Leather Dressing
Lucky Star Casing Patch
Metal and Nickel Polish
Patches (Repair Kits)
Pedal Pants

Polish (Auto Body)
Radiator Cement
Red Tip Blowout Patch
Radiator Hose
Rubber Cement (Cold Patching)
Rim Paint

Rubber Filler and Cement
Rubber Splicing Compound
Spring Lubricant
Tire Mica
Tire Paint
Tire Talc
Valve Grinding Compound
Varnish (Clear Auto)



What we mean when we say, "Internationally Known, Preferred and Demanded"...

MORE than thirty builders of cars in America use DUCO. It has also been adopted as standard finish in one or more automobile factories in the following countries:

BELGIUM	SPAIN
DENMARK	FRANCE
BRAZIL	ENGLAND
UNION OF SOUTH AFRICA	ITALY
ARGENTINE	AUSTRIA
AUSTRALIA	CZECHO-SLOVAKIA

We can offer no more impressive evidence than this of the international scope of DUCO acceptance in the automotive industry.

E. I. du Pont de Nemours & Co., Inc., Chemical Products Division, Parlin, N. J., Detroit, Mich., Flint, Mich., Chicago, Ill., San Francisco, Cal., Everett, Mass., or Flint Paint and Varnish Limited, Toronto, Canada.



There is only ONE Duco—DU PONT Duco

FREE: SPECIAL PROPOSITION
to tire dealers. It's new!
Write for full details . . . today.



HERE'S the SECRET!

THE basic idea behind this success is quite simple. It's just this:

1. Concentration on one brand—one line.
2. Cash business only.
3. Simple but resultful local advertising.
4. Guaranteed quality—backed to the limit by us, as manufacturer.

The big point is . . . that *any tire dealer, anywhere, can apply these same sound principles and duplicate these results! Beginning right now.*

Find out about this . . . today!

This is but one—picked at random—from hundreds in our files. Successful, wide-awake tire dealers from all over the country have written them.

Men who've made big profits in the tire business—as you can—beginning right now.

Send for our special proposition—free to tire dealers. It's new! Something you've never had before.

You know tires—and tire-buyers. Check up on the new EMPIRE, against your own tire judgment. You'll find it right; in weight—in price—in solid, built-in quality.

Then write us. Just ask for our special sales proposition. You're dead sure to get at least one good, sound money-making idea!

EMPIRE TIRE & RUBBER CO.
Trenton, N. J.

THIS MAN

Succeeded with this new policy

*Rapid results followed . . . after R. P. Jacobsmeyer switched — changed policies.
Tire dealers — Read his letter.*

Kirkwood, Mo.
Feb. 10, 1926.

Empire Tire & Rubber Co.,
Trenton, N. J.

Gentlemen:

We have been selling automobiles and tires for the past ten years. It has been our business and we have stuck to it—studied it—learned the “ins” and “outs” from experience.

At first we endeavored to carry several different lines of tires and tubes on account of factory car equipment, but soon became confronted with many complications, mainly: that our capital was not adequate to carry a stock of each of the different brands. Then too, if we did not sell the same tire that came on the car originally, the car owner would go elsewhere for his second set of tires and we would make no positive tire connection.

After having the Empire policy explained to us—the feature of buying direct from the factory—eliminated overhead expenses—made it possible for us to put a spare tire on each automobile we sold and eventually sell another set of tires.

For the past four years we have concentrated on one line—Empire—and have made more money in our tire department than ever before. This is due to the fact that if a customer wants an Empire he must come back to us and we then “cash in” on all of the good things that we can cheerfully say about your tires and tubes.

Now that we carry one line and a good sizeable stock of every size without a large investment, our direct purchasing makes it possible for us to practically undersell any of our competitors, and not only give our customer a better tire but more value.

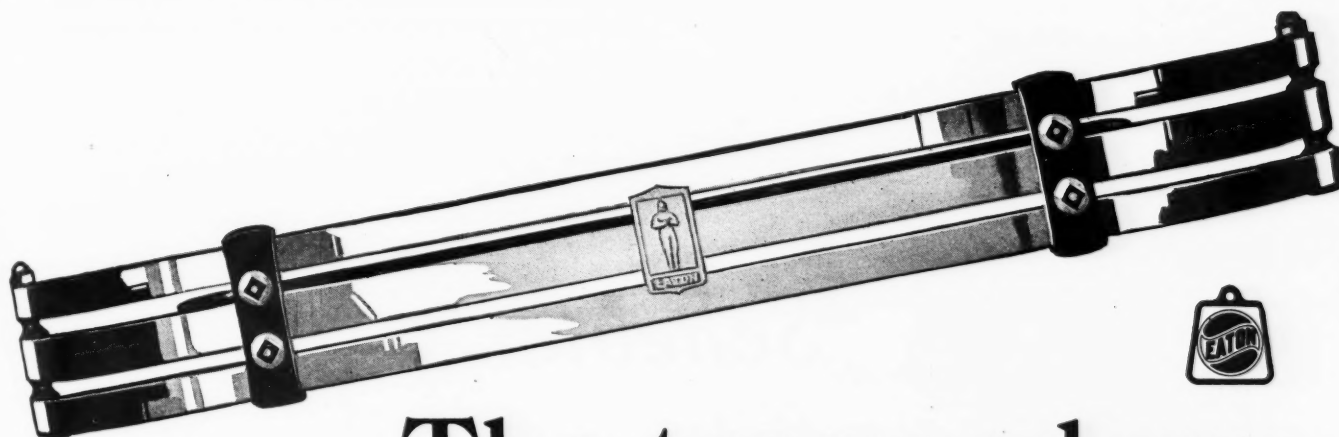
Tire propositions are offered to us frequently and after everything is said and done, we refer right back to our direct distributors' net cost on Empires—we very conservatively weigh each and every argument and have yet to find the first company who has a tire of full weight, full ply and full oversize any where near our prices on Empires.

Because of the qualities embodied in the Empire, the cooperation of the factory with the distributor and your willingness and ability to help the new dealer over the “rough spots” with your name sales and direct advertising plans, it is no wonder that we are rooting for you whole-heartedly—and we want you to know it.

Sincerely yours,

JAKES-BUICK AUTO COMPANY

L/B



The tremendous demand for Eaton Bumpers has kept our greatly increased production facilities operating at top speed

Today the production of Eaton Bumpers is being pushed at the fastest possible pace consistent with Eaton's insistence on highest quality.

Everything points to a great profit year for distributors and dealers who handle Eaton Bumpers.

Complete details of the very attractive Eaton Sales Plan will be forwarded on request.

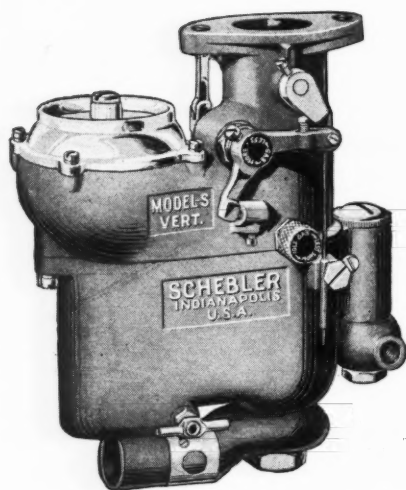
THE EATON BUMPER & SPRING SERVICE CO.
Cleveland, Ohio

Factory Branches with complete warehouse stocks at—Boston, Philadelphia, New York, Cleveland, Detroit, Chicago, Minneapolis, Kansas City, Denver, Dallas, Atlanta

The Eaton organization also produces the famous Eaton Axles and Eaton Springs

EATON BUMPERS

CUSTOM BUILT FITTINGS AND BUMPERETS FOR EVERY MAKE AND MODEL CAR



Schebler's Silver Jubilee Year

THE Wheeler-Schebler Carburetor Company enters this year the second quarter-century of its participation in the automobile industry. This pioneer carburetor manufacturer has for one quarter-century performed a highly specialized service to the industry.

Schebler has won the patronage of a large number of automobile manufacturers and dealers—and merits the consideration of all others—because of its close adherence to basically sound principles.

To manufacture one product only —

a product based on intimate knowledge of the special problems of the industry it serves, designed by engineers who possess vision as well as practical ability and built by careful, competent workmen of long experience.

a product which its users find of uniformly high quality and remarkably free from defects or service problems.

a product which in itself and by its application, aids progress for the industry as a whole.

To transact all business promptly, fairly and with the customer's interests continually in mind.

To merit—through its every action—the firmly established and rapidly growing popularity and prestige of the product in all parts of the world.

It is because these basic things have been adhered to for twenty-five years and will continue to be—that we can conscientiously recommend

Dealers:—The effect of Schebler sales policies on dealer connections has been to maintain satisfactory and profitable relationships over long periods of time. Schebler's concentration upon the production of carburetors exclusively has created a complete line—carburetors for every gasoline engine.

The Schebler franchise is highly profitable to dealers—and consistently profitable. If the Schebler franchise is available in your territory it will pay you well. Write us for information.

WHEELER-SCHEBLER CARBURETOR CO.
INDIANAPOLIS

1926 : Schebler's Silver Jubilee Year : Established 1901

SCHEBLER
"REG. U.S. PAT. OFF."
The World's **CARBURETORS**
Finest

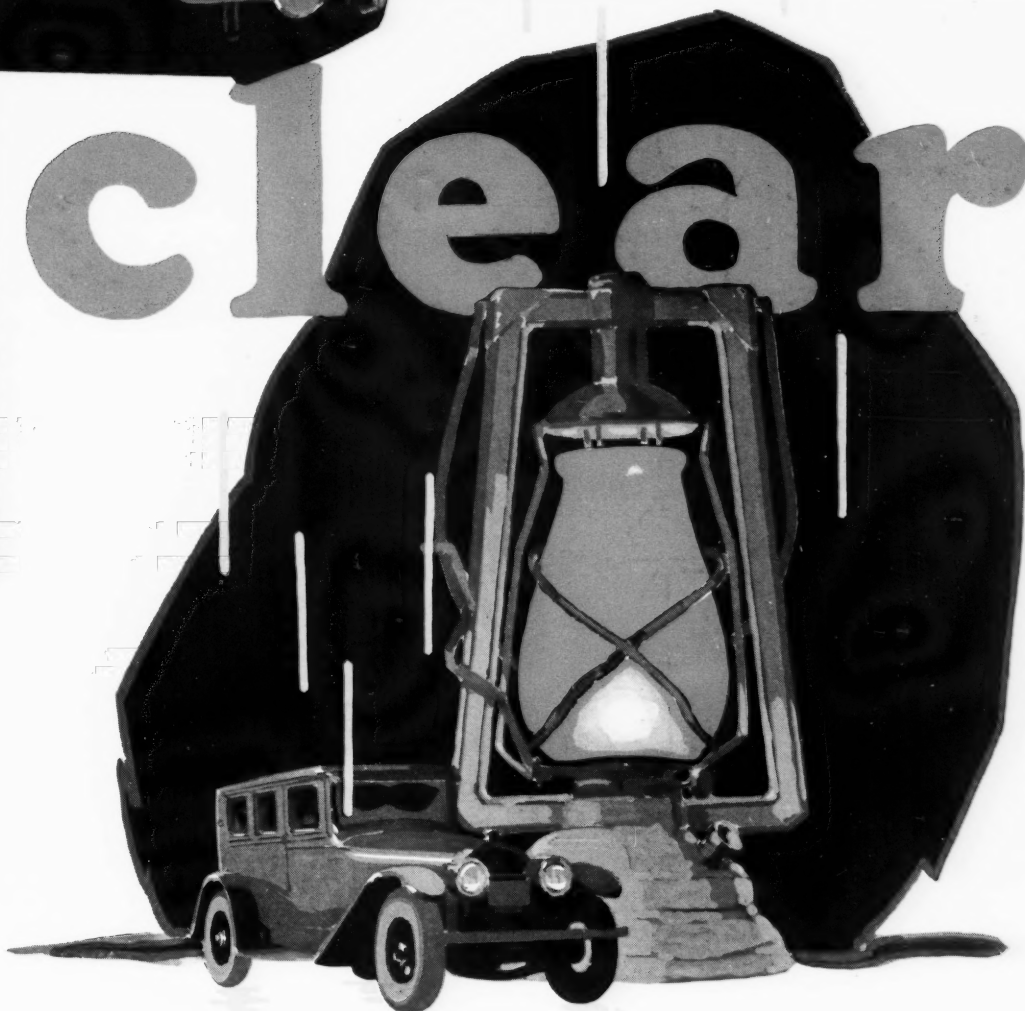


The Bosch Tandem Attachment gives full vision to both front seat occupants—\$1.75 extra



YOU NEED THESE BOSCH ELECTRIC WINDSHIELD WIPER ADVANTAGES

- 1—Electrically Operated. Leaves both hands free.
- 2—Unusual Power, ample for cleaning heavy snow.
- 3—Steady, Positive, Unvarying Speed.
- 4—Quiet, practically noiseless.
- 5—Compact, Unobstructed Vision.
- 6—Non-smearing, Spring pressure insures clean wipe.
- 7—Adjustable, up and down—in and out—adjusts to any windshield.
- 8—Rugged, Long in life, Free from trouble.
- 9—Tandem Attachment. Full vision—All can see ALL.
- 10—Bosch Made, Embodies Bosch Precision, backed by Bosch Service everywhere.
- 11—Economical, Negligible current consumption.
- 12—Independent Unit, Does not effect carburetion—Unaffected by engine speed.



Its Clear Vision Assures Safety

Offer your customers the Bosch Electric Windshield Wiper. It gives real, clear vision. It doesn't race back and forth to dazzle the driver's eyes or make him nervous. It doesn't stall to make him annoyed. The Bosch Electric Windshield Wiper *wipes clean*--with a steady, non-distracting action. It is powerful, operates independent of engine speed and uses a negligible amount of battery current. The twelve advantages tell the whole profitable selling story of this nationally advertised accessory--a real money maker for dealers. Bosch Electric Windshield Wipers are sweeping into wide popularity this year. Order today from your wholesaler or nearest Bosch Branch.

Price \$9.50 Complete.

Tandem Attachment \$1.75 extra.

AMERICAN BOSCH MAGNETO CORPORATION

Main Office and Works:

Springfield, Mass.

BRANCHES:

New York

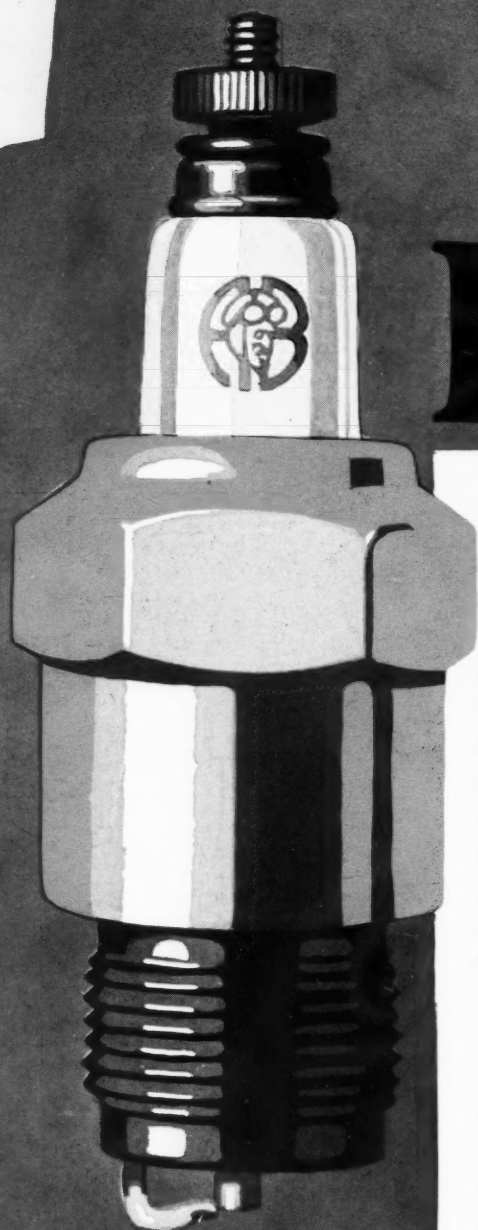
Chicago

Detroit

San Francisco

BOSCH Windshield Wiper

ELECTRIC



BOSCH

The Bosch RED Spark Plug sells steadily. It carries a good profit. It assures constant sales income. Your customers want a leak-proof plug. They want a granite-like insulator which will defy the slipping wrench. They want an insulator which will retain its heat-resisting and carbon-proof glaze. The RED Bosch Spark Plug meets those requirements. It goes further, it insures that hot, ribbon-like spark from crescent shaped, knife edged, non-burning electrodes which give easier starting and better running. Then, too, it has an insulator which resists the heavy voltage strains which shorten the life of ordinary plugs. The RED Bosch Spark Plug makes satisfied customers. It is a trade builder. It is widely and forcefully advertised. As a start to new profits, order a stock today from your wholesaler or nearest Bosch Branch.

Ford Size 75c. Regulars \$1.00.

AMERICAN BOSCH MAGNETO CORP.
Main Office and Works: Springfield, Massachusetts
BRANCHES: New York Chicago Detroit San Francisco

SPARK PLUGS



LINCOLN BALLOON SHOCK ABSORBERS

Making the Best Shock Absorber Better Known

This is a message to those interested in handling the best shock absorber on the market—the shock absorber that builds greatest sales, profits and customer satisfaction.

The Lincoln proposition will appeal to every dealer who wants to handle the fastest selling shock absorber on the market—because of the superior quality of Lincoln Balloon Shock Absorbers, and the advertising and merchandising co-operation given to Lincoln dealers. Here is frankly an opportunity for greater profits for you. Write today — now — for details.

Lincoln Products Company

2649 N. Kildare Ave., Chicago, Ill.

Canadian Factory
Lincoln Products Co., Ltd.
Montreal, Canada



POINTS OF LINCOLN QUALITY

Lightning-quick action; sturdy, simple construction, with only three working parts; ease of installation; freedom from constant servicing or adjusting—and the exclusive oval shaped friction drum which doubles the life of the shock absorbers—these features make Lincoln Balloon Shock Absorbers ideal for every make of car.

**For All Cars
\$15 to \$40
per set of four**

EMPIRE *New Process* BOLTS

"You never see an EMPIRE New Process bolt with a stripped thread."



The new kind of bolt thread that fits like a gauge and can't strip!

The use of EMPIRE New Process Bolts insures a degree of economy and efficiency to which all those who use cut thread bolts are strangers. You will learn what you have been losing in scrapped metal and wasted labor.

Ask for samples of EMPIRE New Process bolts and compare them as to thread, fit and strength with any cut thread bolt made.

Special display cartons have size and style conspicuously lettered. You find the bolt you want at a glance.



RUSSELL, BURDSALL & WARD
BOLT & NUT COMPANY
 PORT CHESTER, N.Y.



Branch Office:
Straw Building
CHICAGO

Branch Office:
General Motors Bldg.
DETROIT

Branch
Factory:
ROCK FALLS, Ill.

Strimple & Gillette
169 Jackson Street
SEATTLE

Maydwell & Hartzell, Inc.
158-168 Eleventh Street
SAN FRANCISCO

Makers of Bolts, Nuts and Rivets Since 1845

Thuro Lubrication Keeps Cars off the Junk Pile!

EVERY car gets enough gas because it won't run without fuel. Most cars get enough oil because overheating and burned out bearings are effective teachers. But chassis squeaks are dismissed as annoying, though not vital, troubles—something to be looked after some other day.

And yet, every squeak is a sign of wear,—and wear means repair—needless expense for new or broken parts and the cost of labor,—and a squeak is merely the first call for help to keep away from the Junk Pile.

Every garage man, service station and filling station operator can give that help and put added profits into his cash register by pointing out the meaning of squeaks and what they cost. Why not get this profit and save money for your customers, with the aid of Larkin-Thuro Lubricating Equipment for Larkin Thuro Lubrication means COMPLETE lubrication—a high grade lubricant forced under pressure to every part of the bearing.

A New Bulletin—just off the press—tells how Larkin-Thuro Lubricating Equipment will help put dollars in your pocket. A copy will gladly be sent you on request. Better send for it.

The Larkin Automotive Parts Co.
2065 Home Ave., Dayton, Ohio

Thuro High Pressure Lubricating Equipment is made exclusively for repair and replacement parts on any car or truck that is equipped with Alemite or Zerk Systems.

Larkin-Thuro Lubrication keeps the up keep down

Puts the grease where the squeak is



Four-fifths of your piston replacement work done better —with only 20 Permite sizes

YOU need only 20 Permite sizes to give better service on almost every piston replacement job you get. Permites are exact factory duplicates of pistons used in nearly all the leading American cars. Made of special-formula aluminum alloy, acclaimed by the most widely known automobile experts as the most efficient piston metal in use.

The Permite aluminum alloy has been perfected far beyond the ordinary piston alloy. It is generally acknowledged to give longer wear with better service. Because of this, Permites have been adopted as standard equipment by manufacturers who produce nearly a million cars per year.

These cars will

need replacements. Permites are always uniform, because they're cast over permanent steel molds *in our own foundries*—something no other replacement piston manufacturer can claim. And the dealer who handles Permites can attract a large volume of overhaul business through the quality of Permite pistons, and the lower cost at which they permit him to do business. That means—profits!

Your nearest distributor can supply you with a stock of Permites at a very small cost. He can guarantee prompt deliveries on sizes not covered by your stock. Get in touch with him today—or write us and we will direct him to have his representative call on you.



PERMITE PISTON COMPANY*
CINCINNATI, OHIO

*We will be glad to consider distributors' applications for desirable territory still open.

PERMITE

PISTONS

Permite Pistons are exact factory duplicates.



U. S. 1/4" PORTABLE ELECTRIC DRILL

Silent Partner to Profitable Motor Maintenance



In 1898 Mr. John A. Smith, President of the United States Electrical Tool Company, gave the world its first portable electric drill.

In perfecting U. S. Drills to a point of proven superiority, Mr. Smith also designed and invented the universal motor.

The engineering and production of U. S. Electric Tools are still under the supervision of Mr. Smith, together with many of his original associates.

The U. S. 1/4" Drill pictured above lists at

\$30.00



U.S.

**Portable Electric Drills
Grinders-Polishers**

—with the finest pedigree in the world. Descendant of the first portable electric drill—it embodies the latest tested points of superiority and is built by the oldest makers of electric drills and grinders in the world.

This 1/4" drill is typical of the entire U. S. Portable Electric Drill line—sturdy, compact, light in weight, perfectly balanced, smooth-running, rugged and durable.

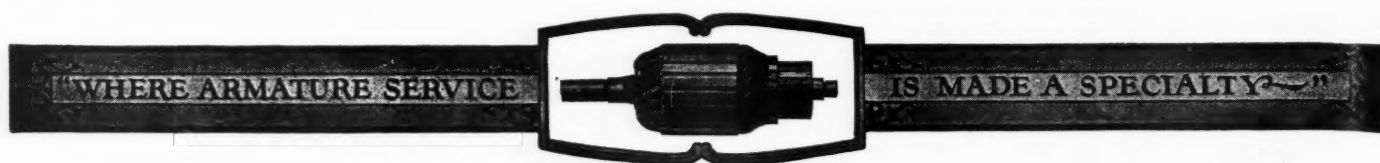
Compare these Features with Those of Any Other Drill

SKF Ball Bearings throughout. Patented Trigger Switch. Integral frame which eliminates misalignment. Jacobs Screw-Back Chucks for easy removal. Construction permits instant adjustment of armature brushes without removal of the commutator head. Properly ventilated to avoid any possible overheating from continuous use. Write for Catalog "H" and check U. S. specifications against those of any other drill.

The United States Electrical Tool Co.
Cincinnati, Ohio, U. S. A.

EXPORT SALES REPRESENTATIVES
Westinghouse Electric International Company
150 Broadway, New York City

Oldest Builders of Electric Drills and Grinders in the World



**A Revolutionary New Service
and
an Old Established One
by the Same Organization
That Always Leads the Way**



Replacement Generator Field Coils

Here is a service that means from the start, a nice profit, a bigger business and jobs that give greater satisfaction. From now on, you can quit re-taping oil-soaked coils. Instead use U. S. Replacement Coils.

A small assortment will fit more than 100 car applications, and a very limited investment gives you a complete stock.

List prices are uniform: for Fords, \$1.50; for all other cars, \$3.60. Order today and take advantage of special price on your opening requirements.

Guaranteed Armature Service

A Half Million Shipped

This is the same guaranteed armature service you have known for years. The stock of 8,000 armatures is always on hand from which we ship the same day we receive defectives from the transportation company.

As always you are in a position to take advantage of this reliable service in rewind armatures, at the lowest possible prices. Write for our complete price list. It's free.

Also ask about Special Repair Service for all types of electrically-driven tools and shop equipment.

Many jobbers sell our complete service. Write

U. S. Armature & Motor Service

(Division U. S. Auto Supply Co.)

11-17 S. Desplaines St.

Chicago, Illinois

Battery Men Are Battery *Merchandisers* Now!



Unprofitable



Profitable

Vesta has changed the whole complexion of the battery business. You reduce to a minimum the small profit, dirty work of repairing—and put in the time at **selling**, where the real battery profits are found.

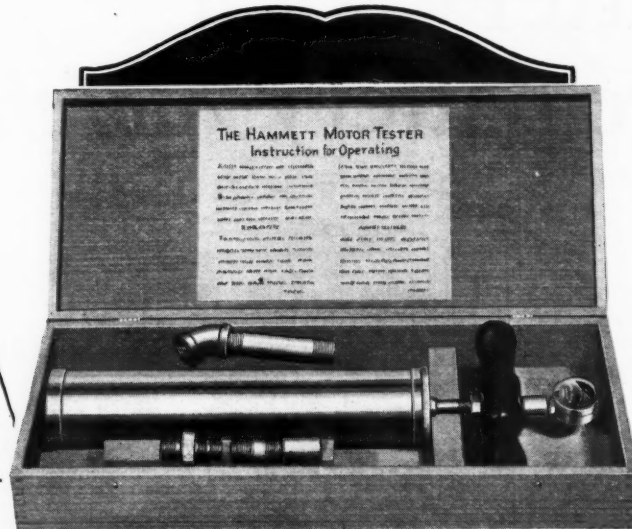
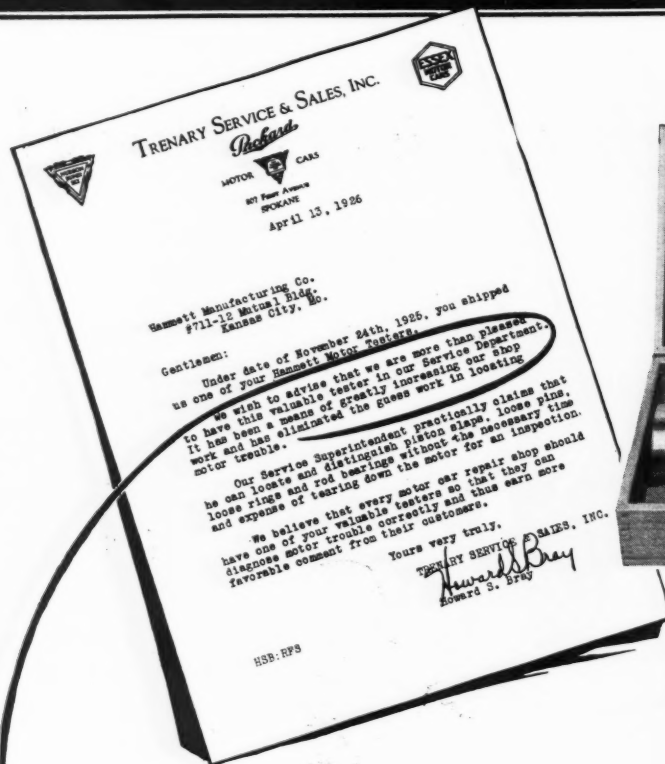
Vesta has opened the eyes of hundreds of battery men—showed them how to make more money than battery-surgery **ever** could give them.

There's a Vesta Central Distributor not far away from you. He'll gladly show you how the Vesta franchise greatly increases the profit of the battery service station.

Ask him for Vesta facts. Ask about Vesta-Vaco, the new battery built to meet and beat price competition. Ask about Vesta-Isolator, whose buckle-proof construction makes it the finest quality battery of all time.

Ask the Vesta Central—or Ask

VESTA BATTERY CORPORATION, 2100 Indiana Ave., Chicago, Ill.



*A time saver
 A business getter
 A good will builder*

"It has greatly increased our shop work"

Mr. Howard S. Bray, of Trenary Service & Sales, Inc., Spokane, Wash., tells in the above letter how the HAMMETT MOTOR TESTER proved a profit and business-getter to his company. Hundreds of other satisfied users say the same—because the HAMMETT TESTER is a "sure business-getter" and a time-saver for shop employees.

Your Shop Can Profit, Too!

You can locate "knocks" in a hurry—test each valve—test main bearings—in fact you can completely diagnose a "sick motor" before your customer. No quibbling over the price—no waste of time in tearing down the motor—just tell your customer exactly what is wrong and the repair cost.

Practical — Efficient — Simple

The HAMMETT MOTOR TESTER is not a novelty—neither is it a piece of complicated mechanism. It is a practical and reliable piece of equipment—designed to do its work in a simple manner—quickly and accurately. If your regular jobber cannot supply you with a HAMMETT MOTOR TESTER, send in his name and we will make sure that you are supplied. Try the HAMMETT in your shop. If you are not perfectly satisfied—send it back—no red tape—no delay. Dealer's price, \$13.50.



HAMMETT MOTOR TESTER

MANUFACTURED BY
HAMMETT MANUFACTURING CO.
 13th and OAK STREETS KANSAS CITY, MO.



Willards reliably warn the pedestrian—



Put life into the starting motor—



Provide dependable ignition—



Operate the windshield cleaner—



Light the road ahead; warn those behind—



And supply current for search-light, stop-light and other auxiliary uses.



“The battery’s part in motor car satisfaction

The little pictures show some of the jobs Willard Batteries are doing in your owners’ cars—jobs that Willards do well—every time—every battery.

—and our part”

—to provide convenient, thorough inspection—the normal care a reliable battery should have—service when service is needed.

The
Willard Battery
men

We Service All Makes and Sell Willards
for All Cars—for Radio, too.

"it was *easier* than I thought *to have a business of my own*"



The New-Day
JEWETT SIX
\$995

PAIGE
*The most beautiful car
in America*
\$1495

"Like every other automobile salesman—I had frequently considered going into business for myself. I knew I could *sell* automobiles—I had sold them for years—lots of them—but always for someone else.

"I've always made a fair living—but the men I've worked for have become rich. I envied these men. I knew I could sell automobiles just as well or better than most of them. What did they have that I didn't? Why could they own their own businesses—while I couldn't?

"Money! Capital! Credit! These were the things *business men* had that I lacked. One day I faced the situation squarely: how much actual money would it take for me to acquire a business of my own? I knew I had everything else—I stood well in my community—business and professional men liked me—I could sell—how much actual money, then, stood between me and a business of my own?

"I wrote the Paige-Detroit Motor Car Company—told them about myself—

asked them how much money I would need to establish a Paige-Jewett business of my own in this city. They sent a man to see me—and I learned a most surprising thing.

"Paige is much more interested in the character and integrity and ability of the men who merchandise their cars, than they are in their wealth. They have a new Dealer Finance Plan that solves most of the finance problems involved. Some capital was necessary—of course—but I had most of that—and their Dealer Finance Plan helped with the balance.

"That was a year ago. I've made more money these last 12 months than I made in the preceding three years. And with the remarkable new values established by the new Paige and Jewett cars—well, I certainly will go great guns *this year*.

"There must be a lot of other men like me—men who could acquire a business of their own as easily as I did. If they see this message—I certainly hope they write the factory for details."

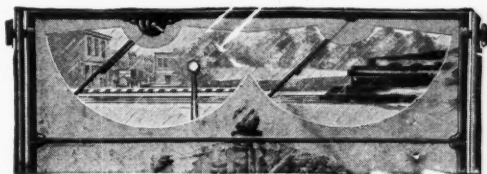
PAIGE-DETROIT MOTOR CAR COMPANY, DETROIT, U. S. A.

Gentlemen:

Please advise whether the Paige franchise is open in this territory.

Name _____

Address _____



The **DYNETO Electric Windshield Wiper**

WITH TWO BLADES—ONLY \$6.00 RETAIL

The Dyneto is a simplified electric windshield wiper; Powerful—Quiet—Dependable and Durable.

Quick, simple installation. Operates from the storage battery, using less than one ampere—hardly as much as a tail light.

The tandem attachment (two blades) is assembled as one unit, requiring no adjustment.

Guaranteed to the limit by the Owen-Dyneto Corporation, Syracuse, N. Y., manufacturers for many years of high quality electrical equipment for America's fine cars.



\$4⁵⁰

With
One
Blade

Your
Customers
Will

**See
Clearly**

the Many Advantages of the
STROMBERG
ELECTRIC
Windshield Wiper

This is the season to sell Windshield Wipers—and here is the Wiper to sell.

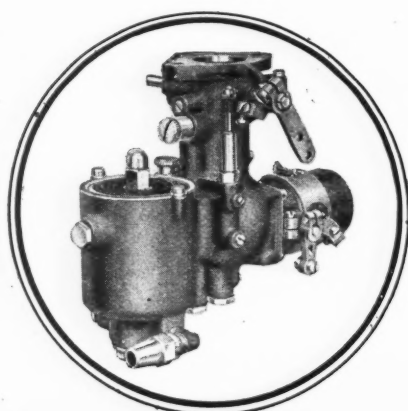
The Stromberg never fails. It operates under all driving conditions.

Its two speeds, adjustable pressure, and other super-features always impress the car owner to the point where he buys.

A Windshield Wiper is the greatest aid to safety and comfort, and the Stromberg is the greatest Windshield Wiper on the market.

Investigate this wonder-wiper. Turn rain drops into dollars by writing today for further information of great interest to dealers.

STROMBERG SPECIAL CARBURETORS



These are the days that every motorist wants quick "get-away," greater power, and most of all to save gas.

The Stromberg supplies all these in the Specially Built Carburetor for every make of car; the one carburetor that holds many world's records for economy, speed and endurance. It's an easy matter to convince customers of these facts.

Write today for particulars and let us show you how we give you every possible assistance in selling the full line of profit-making

Stromberg Automotive Necessities

STROMBERG MOTOR DEVICES CO.

58-68 East 25th Street, Chicago

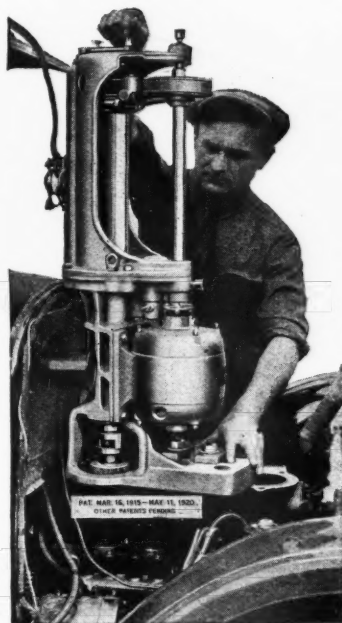
Direct factory Branches: 517 W. 57th St., New York City, N. Y.; 760 Commonwealth Ave., Boston, Mass.; 84-86 Hancock Ave. W., Detroit, Mich.; 1609 Hennepin Ave., Minneapolis, Minn.; 1809 McGee St., Kansas City, Mo.



Two
Speeds

Adjustable
Pressure

Economy
of Battery
Current

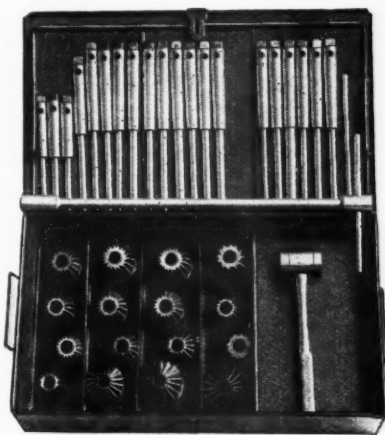


Simplicity in
Operation

Simplicity

Portable Cylinder Reborer and Grinder

***"It Only Took a Few Months for the
Machine to Pay for Itself"*** —H. Zimbal



Simplicity Re-Seating Cutters
and Pilots

The Zimbal Auto Company are dealers in Dodge Brothers Vehicles at Merrill, Wisconsin. They are just like you—a service organization with certain jobs to perform.

One of these is cylinder reboring and grinding—and their equipment to do it paid for itself out of profits.

Think of that! Out of profits!

And then, the profits keep adding up, going into the bank account to help make the business better pay.

Lots of service shops, large and small, know the SIMPLICITY Portable Cylinder Reborer and Grinder will do this for them, and for you. They have tried it out!

Mail the Coupon—Find Out How!

It's the easiest kind of business to get. All you need is the equipment to handle it. Mail the coupon today and we will give you complete details.

Simplicity Manufacturing Co.

110 Spring St.

Port Washington, Wis.

Experienced Garage mechanics with sales ability and small capital wanted in our sales organization

Simplicity Mfg. Co.
110 Spring Street,
Port Washington, Wisconsin

Please mail me your 1926 catalog describing the entire SIMPLICITY line.

Name.....

Street.....

City.....

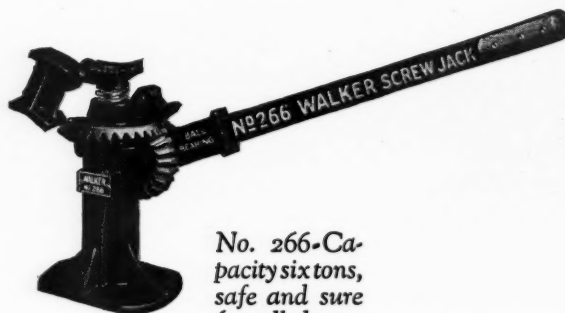
State.....

MA5026

When every garage doing service work is equipped with these four jacks, all anxiety regarding the right equipment to properly handle all lifting and moving problems will have disappeared . . . There is no type of equipment that is more constantly used and no type of service into which the element of speed and safety so vitally enters . . . The day you install these four jacks will be a milestone in your ability to render service . . . This will impress your customers with the fact that they can safely leave their service work in your hands.

Willard Walker

President
Walker Manufacturing Co.
Racine, Wis.



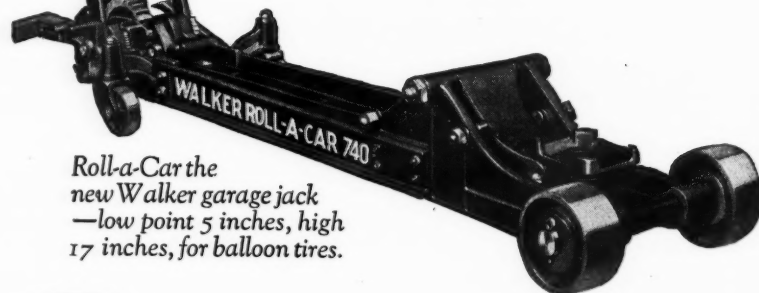
No. 266—Capacity six tons, safe and sure for all heavy lifting.



Lift-a-Car for quick tire changing and putting on chains.



Blue Boy for all types of repair work and every service car.



Roll-a-Car the new Walker garage jack—low point 5 inches, high 17 inches, for balloon tires.

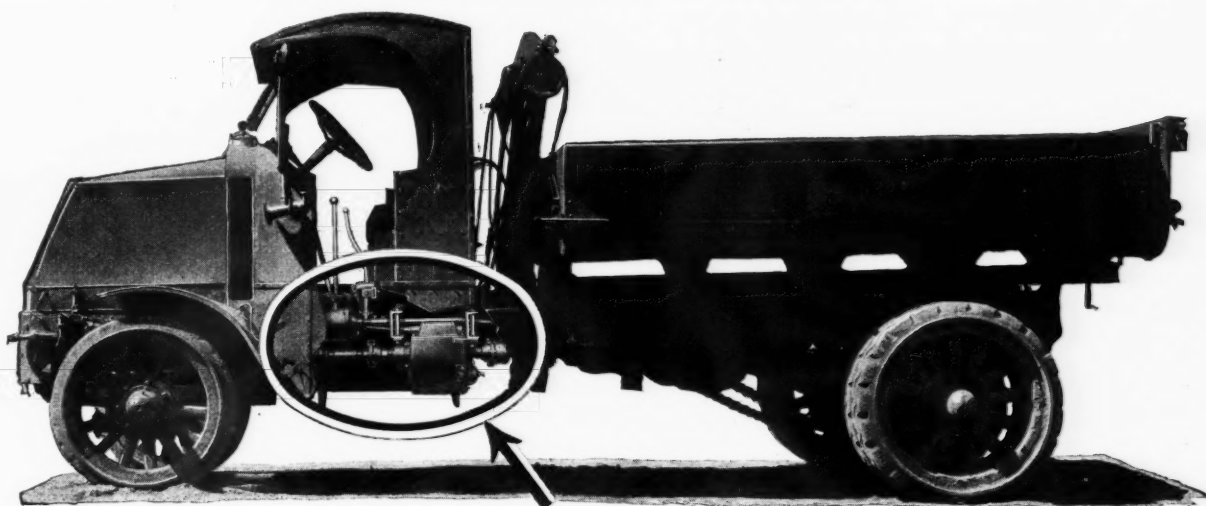
Walker Jacks

"Dependable in Service"



BROWN-LIPE GEAR

Transmissions Clutches Controls



Brown-Lipe Gear Model 60, 3-Speed Auxiliary Transmission
Installed in a 5-Ton Truck, to the Owner's Great Advantage.

See complete description and illustration in—

"Service Installation No. 3"

Write for Your Copy



BROWN-LIPE GEAR CO.
SYRACUSE, N. Y.

Kindly send me free copy of

"SERVICE INSTALLATION No. 3"

Name and Position

Company

Street

City

State



BROWN-LIPE GEAR CO. — Syracuse, N.Y.

SAN FRANCISCO

CHICAGO

DETROIT

NEW YORK

LONDON, ENG.



How Are Your Bushings Boxed and Labeled?

Are the boxes substantial with metal reinforced corners to permit stacking?

Is the labeling readable and does it tell you at a glance the manufacturer part number, the number of pieces, the car or motor and the models which these parts will service?

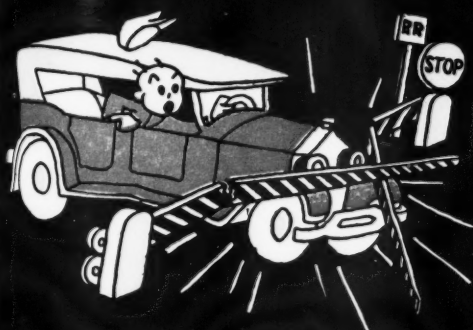
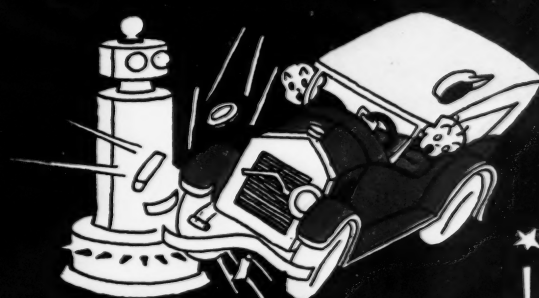
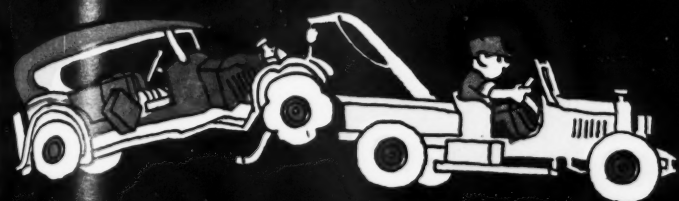
Are your bushings packed in sets according to the number used per car or motor?

Are the bushings standard factory equipment on at least fifty of the finer automobiles, trucks, tractors, motor cycles and aeroplanes?

If not place an order with your jobber for JOHNSON Bushings and SEE THE DIFFERENCE

JOHNSON
STANDARD QUALITY
BUSHINGS

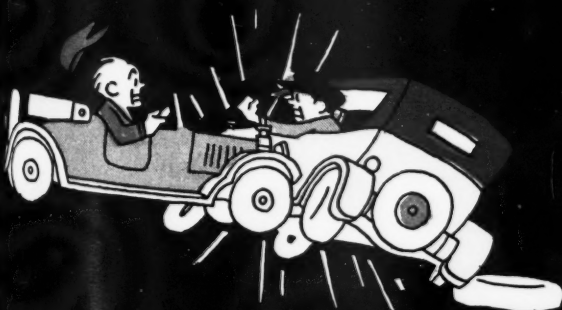
JOHNSON BRONZE CO.
New Castle, Pa.

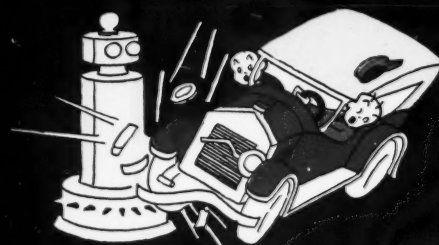
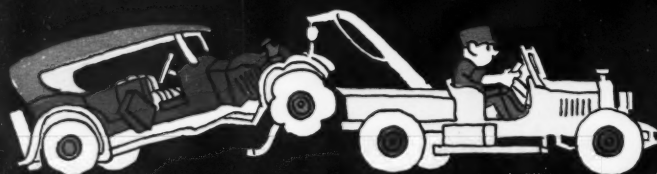


Business is all around you

Go after it!

(next page tells you how)





How to get the brake lining business that is all around you.

ANYBODY can tell you to "go after it." We do not stop there. We say.

"Let's go after it together."

And that is what we are trying to do with all the forces at our command—help you sell and apply brake lining.

Besides the attractive sign shown below we can supply you with many "go-getting" selling helps.

There are probably many more brake lining salesmen at your command than you realize. Through your local newspaper, for instance, you can talk to hundreds of motorists.

Johns-Manville will furnish cuts and copy free.

The postman, too, can be one of your most effective salesmen. Send mailing folders to your prospects, suggesting relining. Johns-Manville has prepared a series of such folders that really bring in business. Get a supply from your distributor.

Another salesman —

JOHNS-MANVILLE Inc., 292 Madison Ave. at 41st St., New York City
Branches in all large cities
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

your mechanic. He can get lots of profitable brake lining business by examining brakes of cars that pass through his hands with other ailments.

Your curb pump may prove as profitable a counter for selling Brake Lining as it is for selling gas. When cars drive up for gas, the man at the pump can tell if they need their brakes examined, or even suggest relining. This method often brings business that would otherwise go to some other garage.

The telephone, too, can be a source of profitable Brake Lining business. Use it on prospects when business is slack to get immediate work into your shop.

These are only a few of the helps that we provide for enterprising garage men. They have proved successful in hundreds of instances. You, too, can make the business of lining brakes profitable!

You can't go it alone!

Write us!

Let's go after it together.



Worth remembering

This Johns-Manville "Brake Service" sign is worth millions of dollars in motorists' good will because the Johns-Manville name is known everywhere. For ten years it has been advertised in hundreds of different magazines. Cash in on its value by putting it up on your shop.

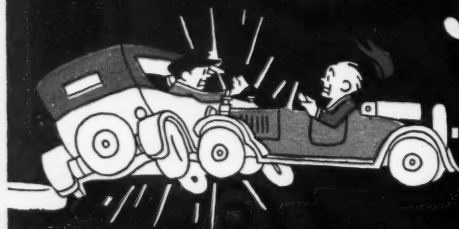


N. B.

Have you seen the new price list on Johns-Manville Asbestos Woven Ground Clutch Facings? They're lower! Write us. We have a real proposition!

JOHNS-MANVILLE

ASBESTOS BRAKE LINING
CLUTCH FACINGS, PACKINGS, Etc.



FREE: An interesting proposition to Truck or Bus Fleet accounts. It's a brand new way to buy tires: Write today, for full details.

MILEAGE *that's Built-in* *. . . not written-in!*

*. . . plus a plan to help you sell
 these tires—at double normal profit*

By RAY H. PADDOCK

Here's what we're offering:

First, a new idea. A plan under which you test every claim we make. You do this *without risk. Without obligation of any kind.*

Second, a NEW tire—a truck and bus cord that's built above standard; in weight, in quality, in price.

* * * *

Truck and Bus cords *must be built up to heavy-duty specifications.* We've exceeded them!

Where they've had to be strong — we've made the Murray stronger.

*Know tires . . .
 how about this?*

The Murray is ten ply, finest long-staple cord fabric full 1¼" staple.

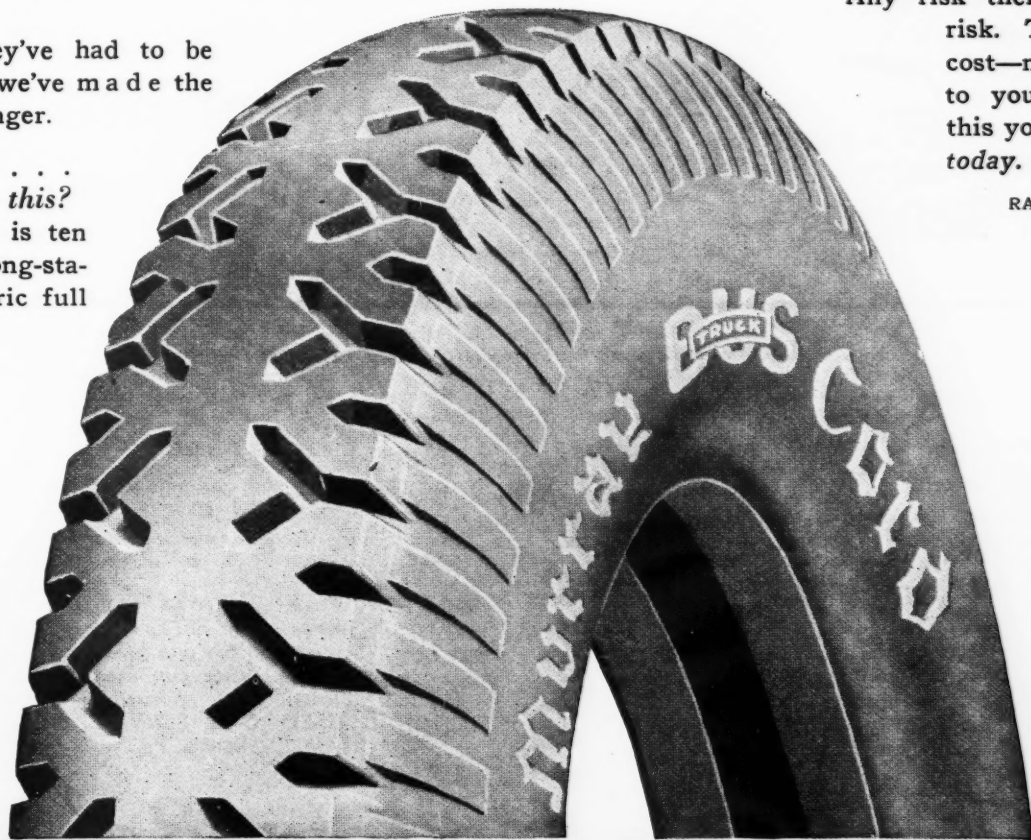
By frictioning process with heavy steel calenders, rubber is driven through the fabric—*completely impregnated.*

The 36 x 6 weighs 71 lbs. without flap or wrapper. Compare this in weight—in size, appearance and durability with any tire you've ever had.

Write me and find out about this unusual offer to actually test these claims. *And remember:*

Any risk there is, is our risk. There is no cost—no obligation to you. Look into this yourself . . . today.

RAY H. PADDOCK



MURRAY RUBBER COMPANY, Trenton, N. J.

OAKLAND—Continued

Future Values

1925—The 6-54 models are continued this year (1925). Landau-Sedan added. 31x4.95 Balloon tires. Rear brake construction changed by increasing length of band levers and curving them backward eliminating two links formerly used. Ball thrust bearings used on front axle kings pins, replacing washers. Radiator is longer and crank now passes through shell instead of apron. Front fender tie rod eliminated. On Special touring and Roadster models, fender guards in rear have replaced full width bumpers. These models are finished in Oakland Blue with black striping. Closed models have new type sun visor and automatic wind-shield wiper controlled from dash. Wind-shields are Fisher one-piece VV. Standard bodies are in Holland Blue with white striping on body and wheels. The new Landau Sedan is finished in Buckingham Gray Duco with red striping, nickel trimmings and black fenders. Has oval windows in rear quarters with carriage irons. Plush mohair upholstery to match finish.

1926—Model 6-54, 6-cyl.; L-head motor; 113" W. B.; 30x5.25 balloon tires, chain drive; semi-steel pistons; 3 bearing crankshaft. Stromberg carburetor; Remy electric system, pressure lubrication to main connecting rod and camshaft-bearings; Hoosier single plate clutch; semi-floating rear axle; mechanical 4-wheel brakes; Jacox steering gear; semi-elliptic springs—36" front, rear 52 1/2". Dot chassis lubrication. First year with oil filter; harmonic balancer and air cleaner; running boards lowered 1 1/2"; ignition coil removed from side of engine and placed under cowl; fenders are full crowned and deeper by 4"; artillery wheels now used on all models; ignition switch and carburetor choke removed from center of steering wheel and placed back on instrument board; all bodies by Fisher finished in Duco.

Model	Year	Type	Pass. Capy.	Cyl.	Bore Stroke	H.P.	Price	Serial Number	VALUES Low High
6-54	1925	Sp. Touring	5	6	2 1/2 x 4 1/2	19	1195		Rhr 300 438
6-54	1925	Landau Cpe.	3	6	2 1/2 x 4 1/2	19	1125		Rsg 338 558
6-54	1925	Coupe	4	6	2 1/2 x 4 1/2	19	1495		Sig 398 594
6-54	1925	Sedan	5	6	2 1/2 x 4 1/2	19	1195		Tnc 422 598

6-54	1925	Landau Sed.	5	6	2 1/2 x 4 1/2	19	1195	64001-54 and up	Depreciation of 40 per cent on these models.
6-54	1925	Sp. Rds.	3	6	2 1/2 x 4 1/2	19	1125		
6-54	1925	Coach	4	6	2 1/2 x 4 1/2	19	1495		
6-54	1926	Touring	5	6	2 1/2 x 4 1/2	19	3295		
6-54	1926	Landau Cpe	3	6	2 1/2 x 4 1/2	19	1125		
6-54	1926	Sedan	5	6	2 1/2 x 4 1/2	19	1195		
6-54	1926	Landau Sed.	5	6	2 1/2 x 4 1/2	19	1195		

Car comparisons sound biased



—unless backed
by printed facts

back up your salesmen with the printed facts on any of 129 cars in the pocket-sized "Little Yellow Book".

Every one of your new car salesmen should carry this book. One house copy is not enough.

For it supports your men with printed proof on any question about mechanical specifications of 129 cars and all the models. Gives them for years back.

comparison of equipment on each one. also a table for computing license rates.

Factory prices.

This 400 page, pocket size, (3 1/2 x 6") book is absolutely authentic in every detail.

Thru the close cooperation with thousands of car dealers all over the United States supplying resale values from week to week, it also includes

High and low used car values.

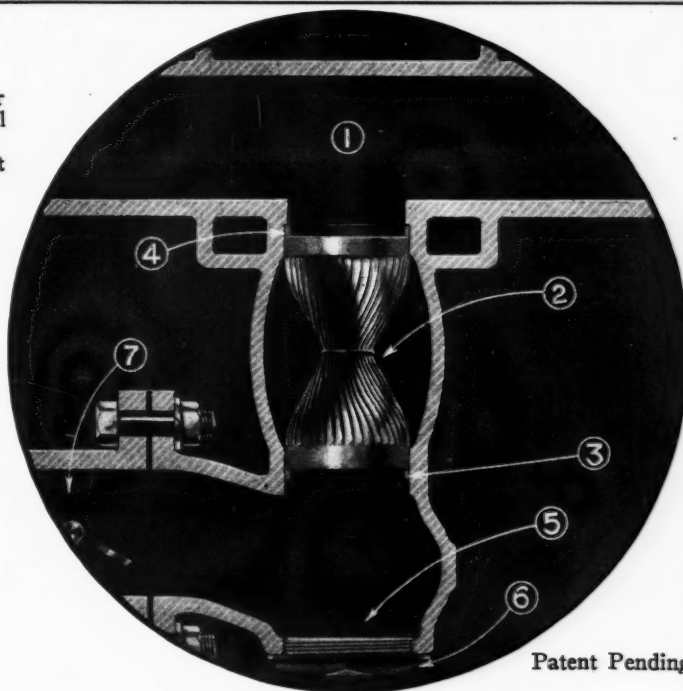
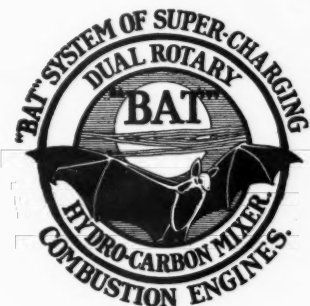
Serial numbers and complete information for identifying used cars.

and in code the highest price you can give for a used car and make money.

Issued every three months or four times a year. Sold on a 5 day FREE examination privilege. Costs \$5.00 for one year, or four issues, which is paid after you are satisfied this book will help you. Write for it to NATIONAL USED CAR SERVICE, INC. CHAMBERSBURG, PA.

"The Little Yellow Book"

- | | |
|---------------------------|--------------------------------------|
| 1. Intake Manifold | 5. Catch basin for trapping raw fuel |
| 2. Bat Hydro-carbon mixer | 6. Plug |
| 3. Lower lock ring | 7. Carburetor outlet |
| 4. Upper lock ring | |



Here Is the "BAT" Super-Charger

The Sensation of 1926 Inventions for Cars, Trucks and Tractors,
Marine Engines, Aviation Engines, Stationary Engines, Etc.

Do you remember last Decoration Day?

At Indianapolis, the sensation of the race was the performance of superchargers.

Now, the "BAT" System of Super-Charging is ready to do for every passenger car, truck and tractor, marine engines, aviation engines, stationary engines, etc., exactly what those super-chargers did for racers.

And the prices range as low as \$7.50.

Dealers—Get Aboard!

Here is one of the great opportunities to make money, through a proven device that you can install on any car in a few minutes. It's simple in principle and application. Its acceptance is assured for new cars and old.

Write today for advance information concerning its operation, its advantages, and its sale!

P. H. WEBBER COMPANY

Racine Industrial Plant, Building No. 12

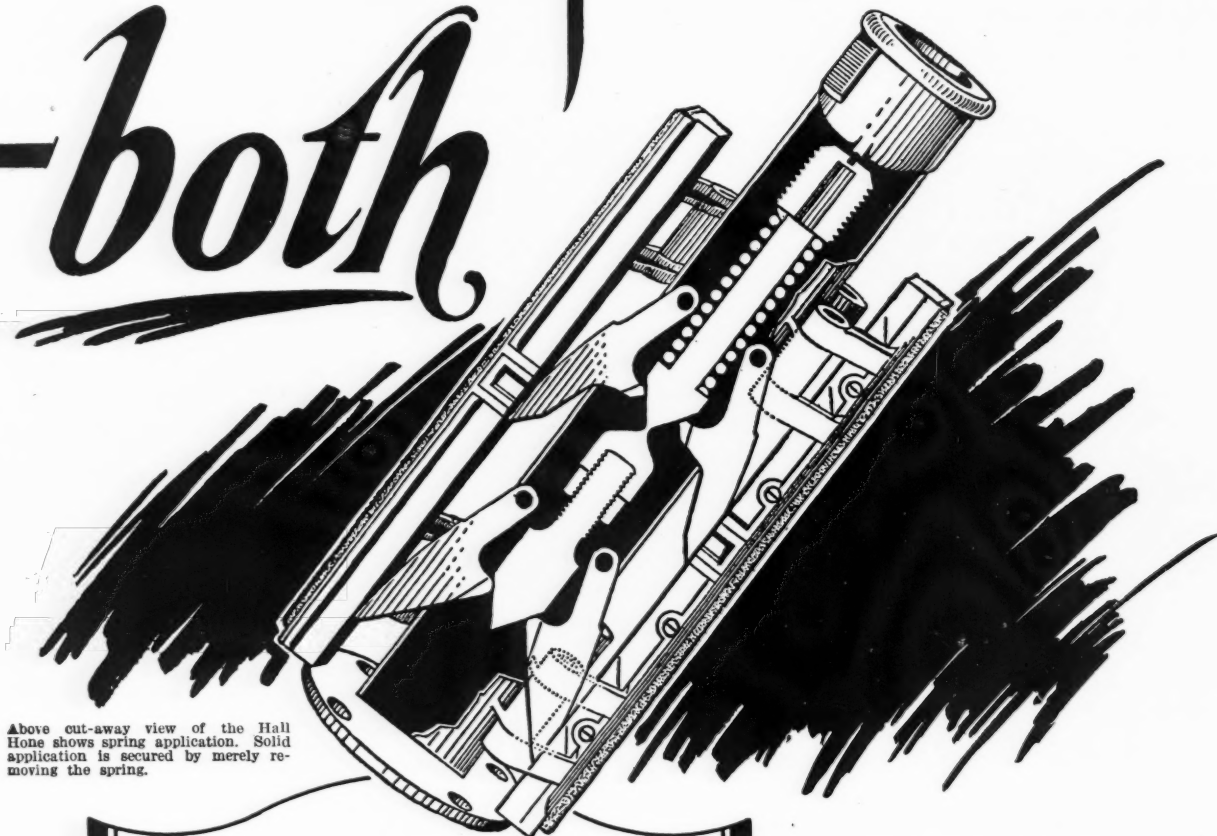
Racine



Wisconsin

Manufactured and sold under license of P. J. F. Batenburg, Racine, Wis.

Solid and Spring Pressure -both



Above cut-away view of the Hall Hone shows spring application. Solid application is secured by merely removing the spring.

THE debate has waxed loud and long over the merits of spring pressure as against solid pressure for cylinder honing.

The Hall Hone settles the problem because it is the only Hone providing both spring and solid pressure in one tool; solid pressure for accurate sizing—spring pressure for fast cutting. Both applications adjustable.

This combination makes the Hall the fastest cutting hone on the market—a tool that will help you get reconditioning jobs out quicker—with less cost to your customers and more profit to yourself.

And Hall-Honed jobs won't come back. The Hall Hone gets both the oval and the taper. Permits fitting piston rings into cylinders that are true circles—makes a perfect seal that stops all oil pumping and gives perfect compression.

You need the Hall Hone. It will increase your reconditioning business—increase your sales of rings, pistons, and parts—and make you more profit.

Ask your jobber for the Hall Hone—the hone with both spring and solid pressure. If he can't supply you, write today for information and new bulletin just off the press. Be sure to give your jobber's name.

THE HALL MFG. COMPANY
505 Hall Bldg., 1600-06 Woodland Ave.
Toledo, Ohio

In Canada, Hall Gear & Machine Company, Ltd.,
Toronto, Ontario.

Foreign Representatives: ENGLAND—Isaac Burgess, London; AUSTRALIA—Sidney Aires, Sydney; NORWAY, DENMARK and BALTIC STATES — V. Loweniers, Oslo, Norway; BRAZIL—M. B. Astrada, Rio de Janeiro; ARGENTINE—Otto Eberson, Buenos Aires.

HALL HONE

\$35.00

*Why Pay More
—for less*

**You can depend
on McCord Gaskets -
most Car Makers do**

Roll Call

**Car makers, truck makers and engine builders
using McCord Gaskets as standard equipment**

Anderson
Ansted Motors
Auburn
Barley
Buick
Cadillac
Case
Chevrolet
Chrysler
Cleveland
Continental
Motors

Cole
Dagmar
Davis
Dodge
Durant
Elcar
Essex
Falls Motors
Flint
Ford
Franklin
Gardner

Hertz
H. C. S.
Hudson
Hupmobile
Jewett
Jordan
Lexington
Lincoln
Marmon
Maxwell
McLaughlin-Buick
Mercer

Moon
Nash
Northway Motors
Oakland
Oldsmobile
Overland
Packard
Paige
Pierce-Arrow
Premier
Reo
Rickenbacker

Roamer
Rollin
Star
Sterling-Knight
Studebaker
Stutz
Velie
Weidley Motors
Westcott
Willys-Knight
Wills-Ste. Claire
Yellow Cab

Acme
Armleder
Atterbury
Available
Bessemer
Brockway
Buffalo
Chevrolet
Clydesdale
Commerce
Continental
Motors
Corbitt
Day Elder
Dearborn

Denby
Diamond T.
Dodge Brothers
Duplex
Federal
Ford
Garford
G. M. C.
Graham
Brothers
Gramm-
Bernstein
Hahn
Hercules Motors
Hinkley Motors

Indiana
Independent
International
Kearns
Kelly-Springfield
Kleiber
Krebb
Larrabee-Deyo
Mack
Maccar
Maxwell
Moreland

Nelson LeMoon
Netco
Noble
Northway Motors
Ogden
Oldsmobile
Oneida
Overland
Patriot
Rainier
Reo
Republic
Ruggles
Sandow
Sanford

Selden
Signal
Standard
Stewart
Tiffin
Tower
Traffic
Transport
United
White
Wilcox
Wilson
Wisconsin
Wittwill
Yellow Cab

This is the 26th Year



of McCord Gaskets

McCord

DETROIT

**Copper Asbestos Gaskets
Radiators for Fords**

**Shims
Tubular Service Cores**

Cork Gaskets

There Are Guarantees —and then there are SUPER-GUARANTEES

Like this . . . We say to our dealers: "Just you go the limit with **Nemco Heavy-Duty Cords**. Invite your trade to make the acid test of comparison anywhere and under all conditions. Place these tires beside any other make on the market. Give them the same road—the same hard going—same ruts and stones—the same gruelling bumps. Then watch them outrun all other tires—bar none."

15,000 miles minimum guaranteed mileage is in itself sufficient to recommend these marvelous tires for stamina and wearing qualities. Obviously a product like this assures many profitable sales and sure repeats for you. That's why **Nemco Heavy-Duty Cords** are the choice of far-seeing dealers, who realize that here indeed is a real triumph of tire construction. Send coupon below for catalog 88A with full description. Complete price list on all sizes of Nemco Heavy-Duty Cords, Nemco Balloons, Nemco Regular Cords.



How Dealers Are Protected By Our Strict Wholesale Policy

Only through strict adherence to this policy could the New England Mills Company have built such a vast volume of sales and such a tremendous list of loyal dealer friends. Realizing this, we have inaugurated a special department under the direction of a dealers' representative who absolutely controls the distribution of our catalog. Requests for "The Little Salesman" 88A are never honored until they have been thoroughly investigated. Mr. Dealer—meet here your representative in charge of this important department—

MR. E. M. BIRD

Send for "The Little Salesman"

88-Page
Catalog



Brim full of the quickest selling, highest standard articles in the whole field of automotive accessories, radio supplies, sporting goods, etc. Everything offered in this book is stocked, ready for prompt shipment.

Before placing your next order for anything in these lines, be sure to get your copy of this authoritative catalog. And remember that on orders of \$75 or more, we prepay freight to any point east of Denver, excepting New England, Texas and Florida. Coupon brings your copy by return mail. Send NOW!

**4000 Quickest Selling
Items at Lowest Prices!**

DEALER'S COUPON!

NEW ENGLAND MILLS CO.

Dept. 70, 851 Washington Blvd., Chicago

Send latest copy of your bargain book, "The Little Salesman," 88A, including price list of all sizes on "NEMCO" Heavy-Duty Cord Tires, and your complete line of automotive and radio accessories and supplies, sporting goods, etc. Also place my name on mailing list to receive your catalogs regularly as they appear every 4 weeks. We attach herewith letterhead or information to convince you we are entitled to dealer's prices.

Name

Address

Town State

New England Mills Co.

Established 14 Years

Wholesale Distributors of Automobile,
Radio Supplies and Sporting Goods

851 Washington Boulevard

CHICAGO, ILL.

Klean-Rite AUTO LAUNDRY

*This Is the Season—
Klean-Rite Is the System*

Washing the millions of automobiles once or twice every week is a Herculean job that is attracting thousands of business men who can grasp the real profit awaiting the washing plants that can do the work more rapidly and better than others can do it. There is no longer any speculation as to the stability and the unlimited possibilities of the car washing business. It is now a question of what system to install.

That may quickly be settled by the process of comparison and elimination.

The KLEAN-RITE Auto Laundry system is the majority choice for innumerable reasons—chiefly because it does the work better, more quickly and at less cost per car. Also because it is a patented process with exclusive franchise territories; because a chain of KLEAN-RITE auto Laundries is being established throughout the country with a national advertising hook-up which will send customers to every station displaying the KLEAN-RITE sign; because it is a standardized service rendered by substantial business concerns at standard prices, permitting KLEAN-RITE plants to meet competition in price and beat it in the washing job.

And because the KLEAN-RITE system turns out a "spick and span car while you wait"—with every particle of dirt and grease removed—the spring leaves, underneath the chassis and fenders—as clean as the day it left the factory. All for a total cost of 82c per car.

All we ask is the opportunity of explaining the KLEAN-RITE system to you before you decide on your washing plant. You owe yourself this information, which will gladly be mailed you upon request. Whether you are considering a washing plant as a side line, as a sales builder for your garage or whether as a feature business—no other system approaches a KLEAN-RITE.

KLEAN-RITE AUTO LAUNDRY CO.

1710 E. 75th Street

Chicago

Write for complete information



You will know a KLEAN-RITE Station by this sign.

**Klean
~Rite**

**Is a Complete
Installation
Ready To
Operate
With Nothing
More To Buy**



A SPIC AND SPAN CAR WHILE YOU WAIT

When Better Caps are Built ~ Keystone will build them

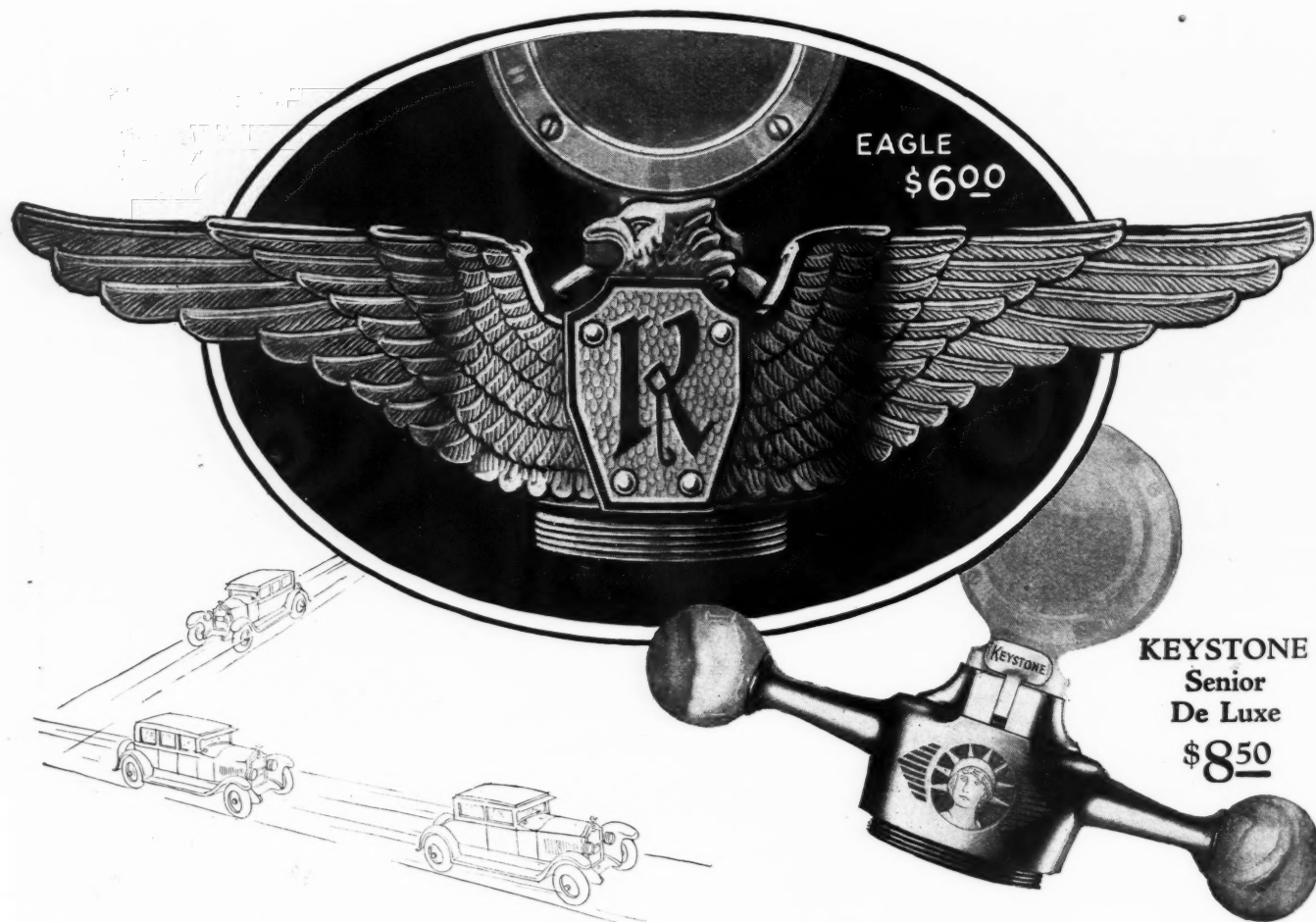
(With apologies to BUICK)

The attractive and distinctive models of KEYSTONE Radiator Caps are the utmost in design, utility, and protection. They are made just as fine as modern equipment and correct engineering can make them. We can truthfully say there is no finer Radiator Cap.

Three beautiful designs—six models—all with the time-proven KEYSTONE mechanical features, afford dealers a Radiator Cap line to satisfy every demand and every price.

The familiar KEYSTONE Eagle and

Eaglet Models, the popular KEYSTONE Senior and Junior Models (plain, bar and ball types), and the distinctive KEYSTONE Senior and Junior De Luxe Models (with genuine Onyx balls) are all available in sizes to fit any car.



Ask Your Jobber About KEYSTONE Caps

THE NORLIPP COMPANY
568 West Congress Street - Chicago



Your Jobber will supply
this Display Stand

KEYSTONE

SELF-LOCKING

RADIATOR CAPS

WHAT YOU WANT IS THAT WHICH YOU KNOW WILL SELL!



MARVEL CUSHION LEGS

**Sell to Every Owner of
Coach Model Cars with Short Legged Seats**

These little cushion legs instantly appeal to the car owner as well as being a great help to the car dealer. They sell on sight. They raise the position of the seat to allow more room for the rear seat passenger, thus giving correct seating position and greater comfort in driving.

Soft, pliable rubber eliminates noise and vibration. Protects floor covering. Just slip them on, that's all.

List Price
\$1.00



MARVEL CRYSTAL GRIPS

**and Extension Handles for
Gear Shifts**

**Beautify the car and make
driving more easy.**

Extension
Lever

Each Dealer Assortment contains: 18 assorted grips.
8 gear shift extension levers, 18 adaptors of assorted sizes.
Price complete \$23.30
Without Adaptors 21.50
List price, Crystal Grips \$.75 each
List price, Extension Levers 1.00 each
List price, Adaptors10 each
Can be purchased as complete outfit or according to specific orders.

Just as beautiful, less than half the price of onyx balls. Inverted crystals assure firm grip. Made in a variety of pleasing colors. Sold in complete merchandising outfit with or without extension levers. Counter display included free with each complete assortment.

for cars with short gear shift levers, make shifting easier. Made in two lengths for medium short and short levers. Highly nickel plated.
List Price \$1.00 each

**And here's your
quickest way to
get started.
Sold by
leading
automotive
Jobbers**



To
THE MARVEL PRODUCTS CO.
4229 Lorain Ave.,
Cleveland, Ohio.



Snap On
No Threads
Manufactured
and licensed
under patents
No. 1512043
No. 1568768
No. 1569881
(other patents
allowed and
pending).

Also
Marvel Gauges
for 23, 24,
and 25 Chevrolet.

MARVEL GASOLINE GAUGE The Fastest Seller For Chevrolet Cars Today!

Licensed to replace the quick acting Easy-On Cap that is standard equipment on latest model Chevrolet gas tanks. A beautiful, accurate working gas gauge retaining the old reliable features of former Marvel gauges. Fits all models. Also made for Star Car. Increased production enables us to make immediate shipment.

List
Price

\$2.00

MARVEL CUSHION LEGS
MARVEL CRYSTAL GRIPS
MARVEL EXTENSION HANDLES
MARVEL GASOLINE GAUGES

Quote us

Quantity

Ship us

Name.....

Street.....

Our Jobber is: City..... State.....

MARVEL
**QUICK SELLING
AUTO ACCESSORIES**

An Invitation!

O. C. HARN, president of the Audit Bureau of Circulations, and a national advertising authority, in a recent lead article in *Printers' Ink* discusses circulations and their variance in character.

He indicates that the "space buyers" in advertising agencies, should be called "audience buyers."

This authority urges that present-day space buyers give the same thought and study to publications' circulation that the factory purchasing agent gives to materials which are used in the company's product.

That's fine! We agree with Mr. Harn 100 per cent. He knows, and we know, *that it's the audience that counts.*

You know it, too, but do you dig down and get the facts?

May we help you in a proving out of audience character and reader interest as concerns publications serving the automotive industry and trade?

Ask the publications' committee of any association you are a member of, or your advertising agency, to come to us and analyze the circulations of Chilton Class Journal publications.

We will show our methods of subscription getting. They do not comprehend premiums or other "unusual" inducements. We will show that the more than 100,000 industrial and trade circulation of *Automotive Industries*, *Motor World Wholesale*, *Automobile Trade Journal*, *Motor Age*, *Commercial Car Journal* and *Operation*

& Maintenance*, includes only men and concerns who subscribe because they want our papers, and who read them because of their editorial worth.

Yes, *it's the audience that counts.* Mere numbers mean nothing. Advertisers will, we have no doubt, come to be in full accord with Mr. Harn and learn not only to buy space, but buy audiences—and reader interest.

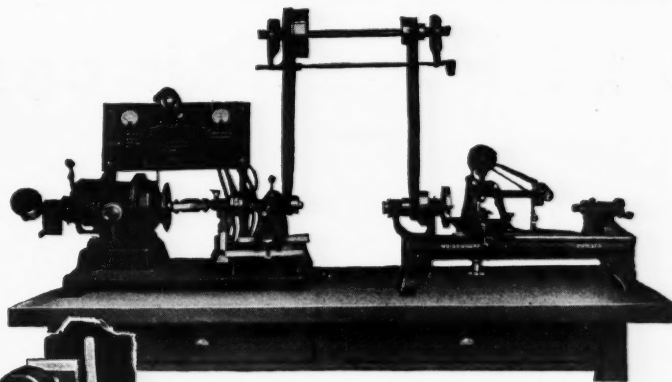
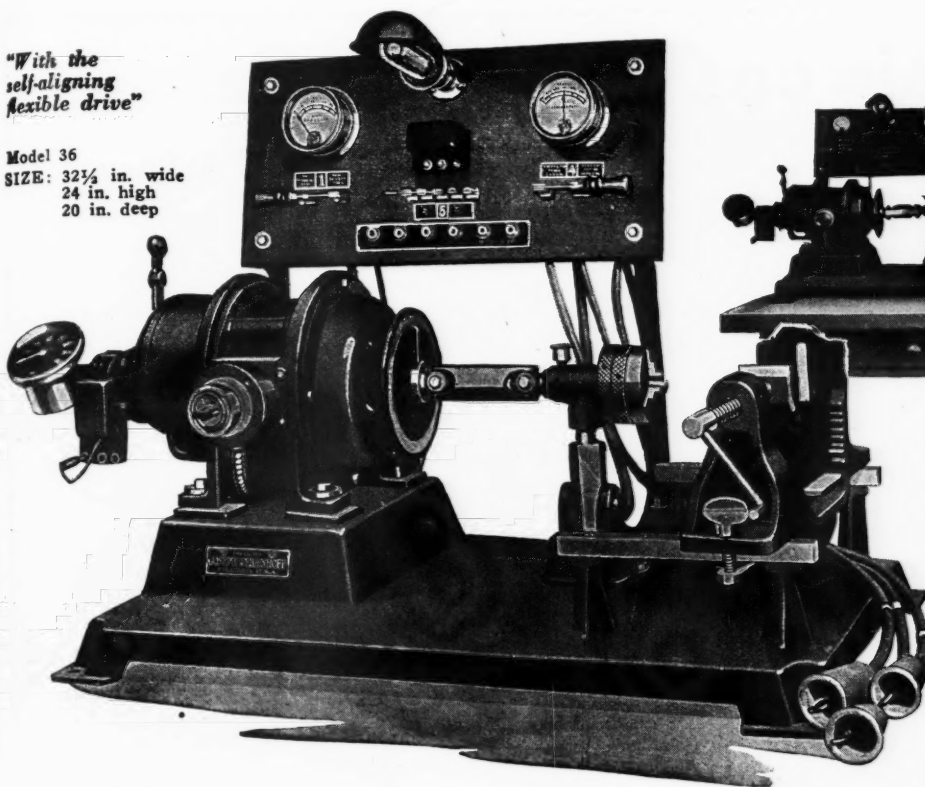


CHILTON CLASS JOURNAL COMPANY
Philadelphia, Pa.

*The publications named herein are all members of the Audit Bureau of Circulations.

*"With the
self-aligning
flexible drive"*

Model 36
SIZE: 32½ in. wide
24 in. high
20 in. deep



Showing the New Weidenhoff Model 36 Test Bench, hooked up with Weidenhoff Lathe and Undercutter—a marvel of completeness and efficiency in shop equipment to meet today's competition, in servicing the car.

The complete outfit as shown—\$79 cash—balance in 12 easy payments—or may be purchased in separate units.

Profits Roll Up for These Stations

Battery Men and Service Stations from all over the map are reporting big increase in profits with Weidenhoff equipment. The enthusiasm with which they welcomed the New Test Bench is a wonderful endorsement of Weidenhoff engineering.

It is the result of our studying the needs of the trade and originating equipment to better the working conditions in the service station.

New Weidenhoff MODEL 36 **Test Bench** Sets On Any Work Bench

The New Test Bench is so low in price and has so many uses that no Battery or Service Shop can afford to be without it.

So many shops are having such tremendous success with it that we urge you to learn the complete facts about it without delay.

It will quickly pay for itself out of the increased business it will bring to your shop.

The easy payment plan—\$55 cash, balance in 12 payments—is well within reach of all.

Ask your distributor OR write for booklet

BETTER EQUIPMENT for BETTER BUSINESS

The Weidenhoff Line

Test Benches for Ignition,
Starting and Lighting
Units.

Constant Potential Charging
Equipment.

Lathes for Armature
Work

Commutator Mica Under-
cutters.

Armature Testers.

Bearing and Gear Pullers.

Battery Discharge Sets.

Cell Testers.

Magnetizers.

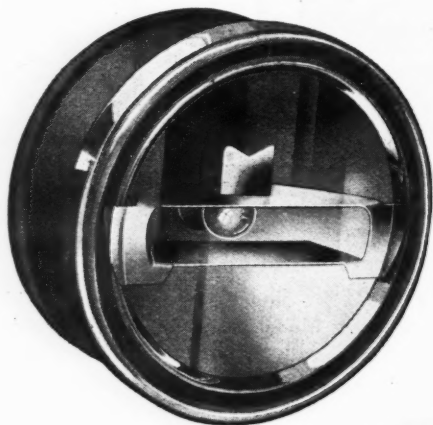
WEIDENHOFF
Shop Equipment
for Battery and Electrical Service
4358 Roosevelt Road, Chicago, Ill.

*"Watch
Weidenhoff"*

Put a Pair on Your Own Car

FREE!

For Any Standard Headlamp



Freemo-Lite
"Easy To Install as the Bulb Itself"

Price Per Pair \$1.00

Keeps the rays on the road without reducing the quality of the light. Fits over the bulb in any standard headlamp.

**Better Than "Regular Discounts"
 Liberal Credit Extended**

An extra long profit earned on this item. It brings in easy sales, moves fast through stock, and takes up little room on the shelf.

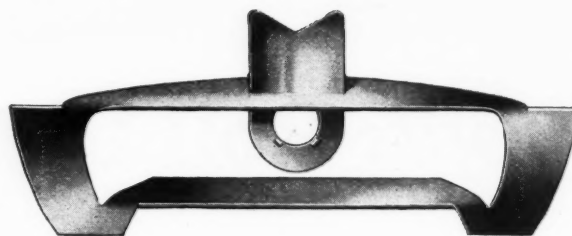
Watch for extensive bill board advertising and other dealer helps to boost your volume. We make Freemo-Lite one of the most attractive and profitable products on the market for you.

Try a Set Free!

There are no strings tied to this FREE offer. Just mail the coupon from the corner of the page, attached to your letterhead to show us that you are a dealer. We even pay the postage on the set you get. A sample pair of Freemo-Lites are yours for the asking. ASK!

FREEMAN PATENTED PRODUCTS CORP.

343 S. Dearborn Street, Chicago, Ill.
 Manufacturers of Freemo Products

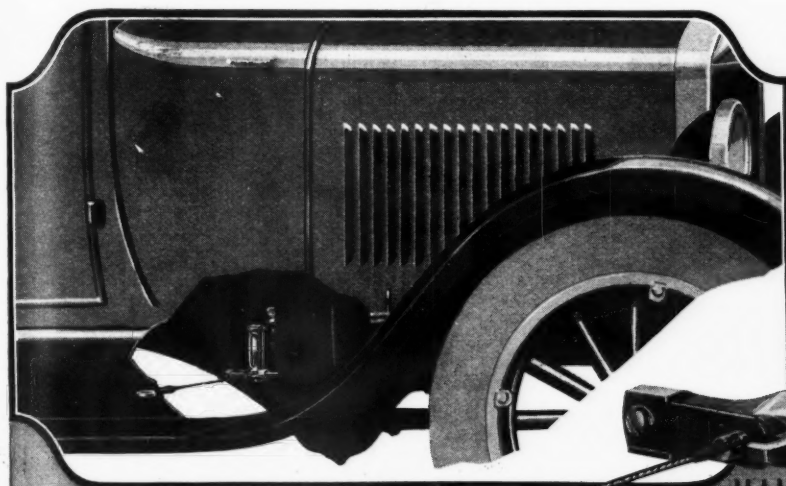


**Not
 A
 Lens
 !**

Mail the Coupon Attached
 to Your Business Letter-
 head For YOUR Own
 FREE SET.



Freeman Patented Products Corp.,
 343 S. Dearborn Street, Chicago, Illinois.
 Mail me absolutely free of charge one pair of
 Freemo-Lites, according to your advertised offer.
 Name
 Address
 City
 State

ILLINOIS
OIL INDICATOR
No. 2ILLINOIS
OIL GAUGE
No. 3

Steady Profits for Dealers in this Self-Selling Ford Necessity

AT last! Here is a real oil level tester for Fords that actually eliminates all the dirty, dusty mess of finding out whether the car needs oil. No longer does the driver have to "get out and under" to turn the oil pet cock—simply pull the handle in the side of the car above the running board—and the

Illinois Oil Indicator or Illinois Oil Gauge

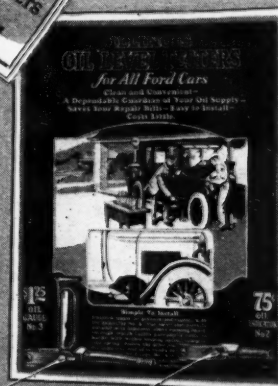
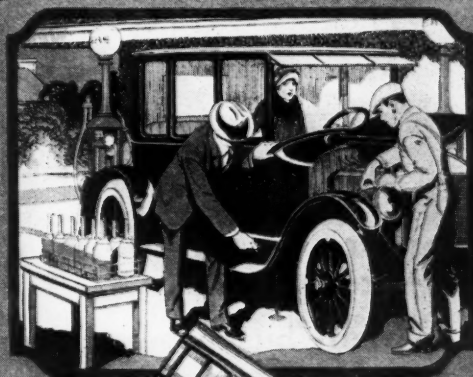
tells you immediately. Every Ford owner and driver insists upon having one as soon as he or she sees it. Made in two styles—the No. 2 Illinois Oil Indicator retails for 75c—the No. 3 Illinois Oil Gauge retails for \$1.25. Either style can be installed in a few moments by anyone without special tools.

FREE—Self-Demonstrating Counter Display

We furnish free with your order a quantity of descriptive folders and a self-demonstrating counter card.

There will be a big demand for this long needed Ford convenience. Be prepared to get your share of the profits by sending your order in today—write your jobber, or send your order direct.

ILLINOIS BRASS MANUFACTURING COMPANY
222 North Ada Street, CHICAGO, ILL.



**ILLINOIS
BRASS MFG.
CO.**
222 North Ada Street
Chicago, Ill.

Please send full information
on Illinois Oil Level Testers.

Name.....

Address.....

City..... State.....

PROTEXALL

One-Piece
Garments

KNOW NO SEASONS

and Protexalls may be worn at any or all seasons of the year. They are manufactured in several grades of various weight materials, using Blue and Brown Denim, Khaki, Hickory Stripes and White Drill—You may make your selection according to the weight of material desired; especially if your business is guided by a particular season.

SPECIAL PROTEXALL SERVICE

Many businesses are particular in quality and color of material used in the work garments their employees wear. We manufacture specially constructed fabrics made to the customer's order. We can bring out any desired color schemes, advertising trade marks, or special features that are desired. 35 years experience is stitched in every Protexall and that is why once you buy Protexalls, you will never be satisfied with a substitute.

PROMPT DELIVERY ASSURED

We offer exceptionally prompt shipment and have a special Western Office that greatly facilitates Western delivery. We are in a position to give unusual quick service. All Protexalls are packed in individual dust-proof cartons that reach their destination clean, fresh and ready to put on.

Sold Only Through Jobbers and Dealers

THE PROTEXALL COMPANY

ESTABLISHED 1899

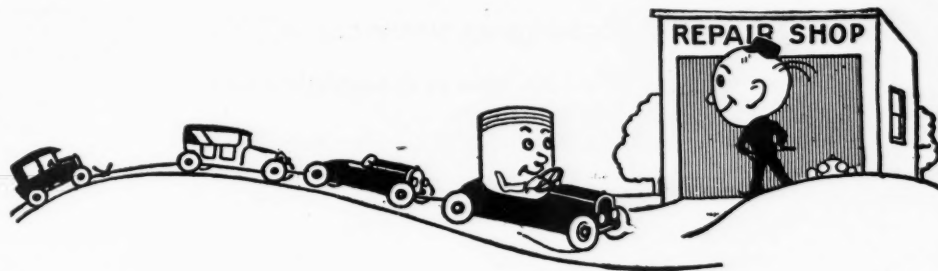
Abingdon, Illinois also

**312 W. Second Street
Salt Lake City, Utah**



Protexalls as Uniforms

Large employers of men using work garments have found it pays to dress their employees in uniform style. Protexalls offer an economical and practical way to do this. It's good advertising too—when the garment carries your trade-mark or firm name.



Every Kant-Skore job brings many others to you

Car owners everywhere are requesting Kant-Skores. Dealers are getting better results with them than with any other piston. Remember—overhaul work is the best paying part of your business. Your overhaul work can't be any better than the piston you install. And Kant-Skores are 'way ahead of all the others.

You can depend on Kant-Skores customers to tell their friends about Kant-Skores—how much better they make any replacement job. That's why every Kant-Skore job brings many others to you.

Kant-Skores have features found in no other piston. Made of a spe-

cial aluminum-alloy, they reduce vibration—make motors cooler, sweeter-running.

But their real superiority is in the patented Kant-Skore spiral slot. Because this slot is spiral, Kant-Skores can be fitted tighter than any other piston on the market, *without scoring cylinders*. They increase compression—use less gas—give more power than any others. And carbon troubles are almost completely done away with.

Kant-Skores cost very little to stock. Your distributor has them, and can always give you immediate delivery. See him today, or write—

THE KANT-SKORE PISTON COMPANY,
Cincinnati, Ohio, U. S. A.

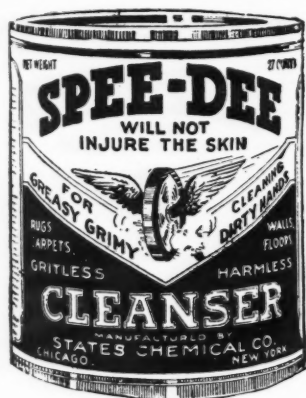
Kant-Skore
WEIGH LIGHTEST PISTONS FIT TIGHTEST



"Here's Something, Jim, you ought to have in your car all the time. It's the finest hand cleaner. No water necessary. A big can's only 35c"



How Many of Your Customers Will Tour This Summer?



Big 27 Oz. Can

Every one of them will appreciate you selling them SPEE-DEE, and you make a dandy profit on every sale. SPEE-DEE "washes" hands **without water**. Just rub it on, and wipe it,—**and the dirt**—off, with a towel or cloth. It's soothing to the skin. Users keep re-ordering.

Big Profits! Read This Special Offer

Two cans free—14 big 27 oz. ones—at the price of a dozen on your first order. You make 43% profit and educate your customers to come back and ask for more SPEE-DEE.

No money down. If you can't sell SPEE-DEE inside of 60 days, send it back to us. That's our Special Offer Guarantee for the next few weeks.



Here's the counter or window display we furnish free. It helps you sell SPEE-DEE faster and oftener.

States Chemical Co.
705 W. Fulton Street
Chicago, Ill.

NOW

Mail This Special Trial Offer Coupon!
60 Day Money Back Guarantee
On Open Account!

States Chemical Company,
705 W. Fulton Street, Chicago.

Ship us on open account for 60 days, through our jobber or direct.....dozen SPEE-DEE at \$2.75 per dozen. Include 2 extra cans free with each dozen, new 5-color Art Paint Poster, and circulars.

Our Jobber is.....

Signed

Address

City..... State.....



Clear Vision Increases the Value of Your Window Display

Pedestrians and motorists passing by, look into those windows through which it is easiest to see.

It is, therefore to the advantage of every automotive merchant to display his goods in large spacious windows of modern design.

A more vivid comprehension of the value of "clear vision" can be obtained by comparing the old fashioned front with the modern

front of today. The former was merely a partition with glass in it to admit daylight, keep out the elements and act as sort of an enclosure for the crude exhibition of merchandise.

The modern front not only protects the interior from the elements but also enables progressive merchants to trim their windows in a sales producing manner.

MODERN

Kawneer
SOLID COPPER
STORE FRONTS

are profitably serving over a quarter million merchants.

The
KAWNEER
Company

3624 No. Front St.
Niles, Mich.

Send suggestions for
motor sales display
windows.

Name _____

Address _____

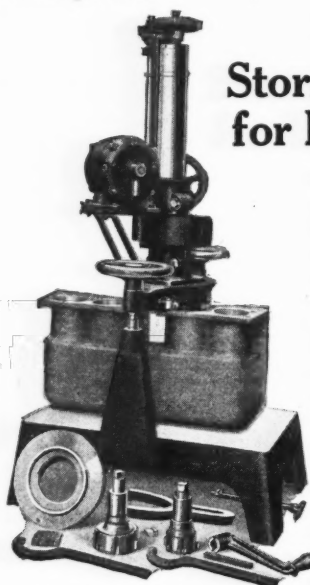
City _____ State _____

These STORM Tools make flat rate cylinder work really profitable

This Storm Combination puts quality work under definite control.

Any shop man who wants equipment to do a first class, precision job of cylinder reconditioning, will do well to find out about these Storm Tools.

Here are tools that do cylinder reconditioning, and do it right. Their low original cost, automatic and labor saving features enable any shop of any size to do accurate cylinder renewing at the flat rates, and make real, worthwhile profits.

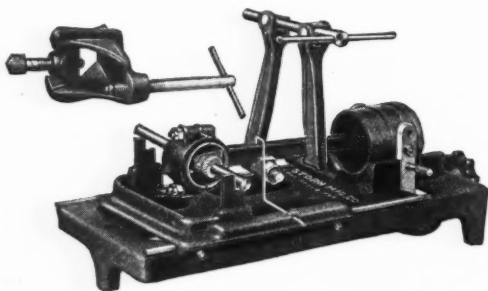


Model M. Capacity $2\frac{5}{8}$ " to 6" by 15" Deep

There's a Stormizing Machine for Every Size Shop

No matter how large or small your shop, you'll find a Stormizing Machine fitted to your needs. All four Stormizing Models do a perfect job of cylinder over-sizing within the capacity limits of each model. This machine will correct the worst kind of scored or out-of-round cylinders—making them perfectly round and square with the crank shaft. All Stormized cylinders of a block will be identically the same in size. After centering and clamping, the machine operates automatically— independent of human skill. Highly paid mechanics are not required to operate the machine and do a perfect job.

Find out about this unusual machine. Let us tell you about the way other shops are building business and profits with Stormizing. Use the coupon.



STORM RITEWAY Connecting Rod and Piston Aligner

The STORM Riteaway Aligning Jig introduces an entirely new and dependable method of aligning the piston and wrist pin with the connecting rod bearing. It is universal to take all sizes and makes.

It's a true precision Tool and provides a means of checking both for twist or bend in a connecting rod in one operation either with piston on or removed.

One adjustable rod steel bar displaces the usual set of mandrels or bushings. It is almost instantly adjusted to all size bearings, including all under or oversizes, and it makes it unnecessary to adjust the connecting rod bolts or remove the shims.

A gauge attached to the aligning part of this fixture shows where the corrections are to be made. Special tools are provided to quickly and easily bend or twist rod into perfect alignment while assembly is attached to jig, and the strain of straightening the rod is not applied to the jig itself but instead is applied to these special tools, thus positively eliminating any chance of springing the main fixture, as would be possible in other tools of this kind. The Riteaway is a necessity in every shop installing new pistons and doing cylinder renewing.

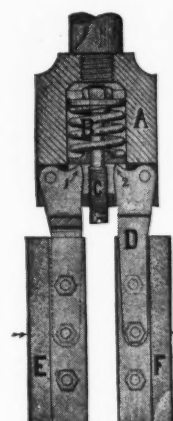
STORM Cylinder Hone One Head takes all sizes $2\frac{3}{4}$ " to 8" Diameters

This is an ideal tool for correcting slightly out-of-round cylinders, and for giving cylinders a gun barrel finish after Stormizing.

The sturdy construction and absolute self-centering features, together with its simple, instant adjustment and wide range of capacity make it ideal equipment for any shop.

Its Principal features are: Speed and efficiency in operation—perfect "Gun Barrel Finish" produced—wide range of capacity—proper grinding tension for any and all diameters—absolute self-centering and perfect balance of pressure along entire face of both stones.

The mechanism is all above the stones and not between them. This permits of all parts being made exceptionally heavy and substantial, the use of larger stones and less parts. For these reasons the Storm "Stays Sold." One set of Storm Stones will outlast four to eight sets of smaller types. This construction also enables us to produce a tool of unusual capacity. The one head takes all sizes. ($2\frac{3}{4}$ " x 8")



One Master Spring keeps pressure equal against each stone.

STORM

406 (A) 6th AVE., SOUTH, MINNEAPOLIS, MINN.

MFG. CO., Inc.

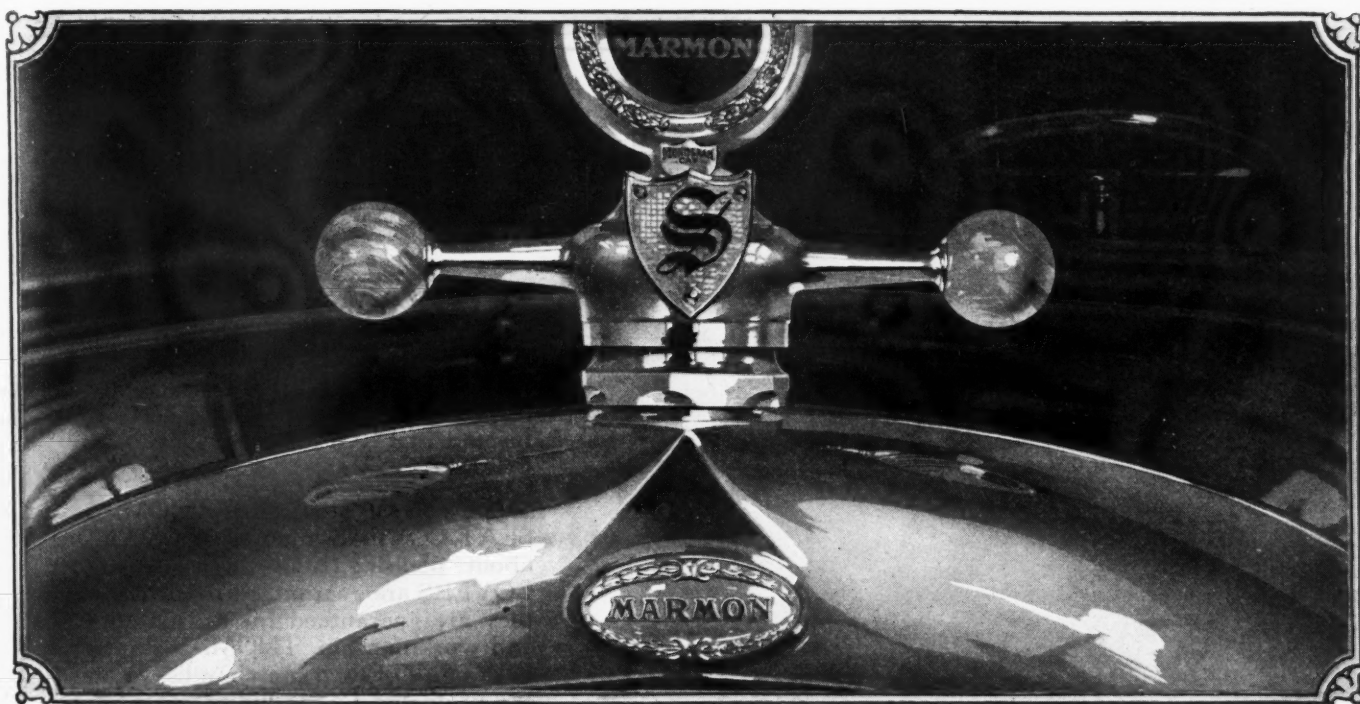
Please send me without charge, full information on the subjects checked here.

- ☐ The complete Stormizing Process.
- ☐ The Storm Hone and its self centering features.
- ☐ Explain how simple it is to secure "Free Floating" fit of pistons by use of the Riteaway Aligner.

Name.....

Address.....

Town.....State.....



Quality Demands Quality

*Count the MONOGRAM Radiator Caps on the cars you pass and you will see why jobbers, dealers and car owners everywhere prefer MONOGRAMS.

This universal preference for MONOGRAMS proves the effectiveness of MONOGRAM National Advertising, backed by a sound merchandising policy which has won jobber and dealer support for a real quality product.

Your choice of three distinct models—Royal Onyx Cap—Standard Bar Cap and Wing Cap—in both Junior and Senior sizes.

No Tools Required for Installing

The MONOGRAM Line is a profitable one for you because it does not tie up your capital in a big stock assortment of sizes. Our Caps are installed in a few seconds.

MONOGRAM Cap prices are right—ranging from \$4.00 for the Junior Standard model to \$10.00 for the Senior Royal Onyx model. MONOGRAM Illuminated Gear Shift Ball, \$5.00. MONOGRAM Locking Gear Shift Ball, \$2.50.

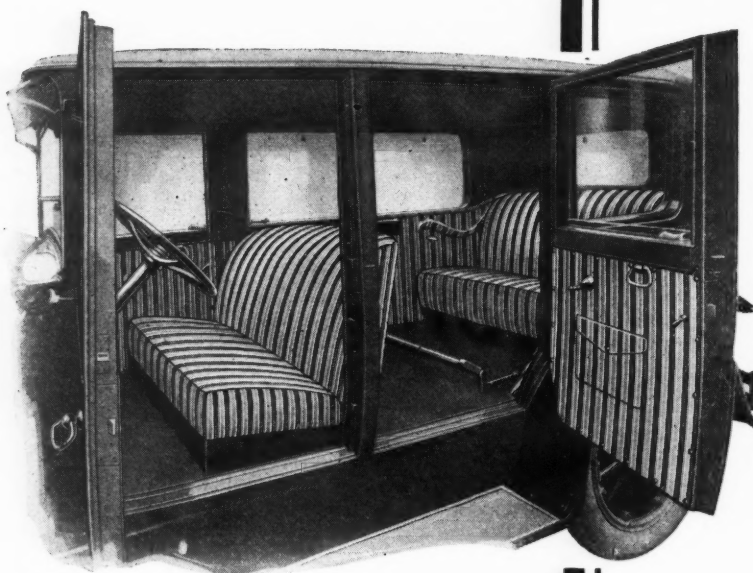
Be sure to provide for a big 1926 demand for MONOGRAM Locking Gear Shift Balls and Illuminated Gear Shift Balls. An assortment of bushings adapts these Balls to all cars.

Write for descriptive literature

THE KINGSLEY-MILLER COMPANY
600 W. JACKSON BLVD. CHICAGO, ILLINOIS



**This is the first of a series of special ads appearing in the Saturday Evening Post and other national publications, showing MONOGRAM Caps on well-known cars.*



FULL COVERS

Profit or Profits

When you sell a customer one time, you make one profit. If he is satisfied with his purchase, he will return for additional accessories or service. Instead of PROFIT—you will make PROFITS.

When you sell a customer THOMAS SEAT COVERS, there isn't any "if" about pleasing him. THOMAS COVERS are guaranteed to please—they are guaranteed for fit, material and workmanship. THOMAS stands back of all of their merchandise. You are protected to the limit. The big variety of colors, designs and prices meets everybody's taste and pocket-book.

Thomas



SEMI COVERS

prices are right. Compare them with any other standard make—another reason why THOMAS COVERS are the biggest sellers.

That's why you can figure PROFITS — NOT profit — when you sell THOMAS SEAT COVERS.

THOMAS Sample Display Board creates sales for you. It will be sent to you upon request, together with new catalog and attractive discounts.

THOMAS products are handled by the leading jobbers everywhere.

Thomas Auto Top Company

Radiator Covers
Tire Covers

MUNCIE — INDIANA

Top Recovers
Seat Covers



The Morse Honor Roll

Cadillac Eight
 Chandler Six
 Chrysler Six (70)
 Chrysler Six (80)
 Cleveland Six (31)
 Cleveland Six (43)
 Davis Six (92)
 Davis Six (93)
 Diana Eight
 Essex Six
 Fiat Six—(5-90)
 Flint Six (Jr.)
 Flint Six (60)
 Flint Six (80)
 Hudson Six
 Hupmobile Six
 Hupmobile Eight
 Jordan Eight (GL)
 Jordan Eight (L)
 Lincoln Eight
 Moon Six (A)
 Oakland Six
 Oldsmobile Six

*

Peerless Six (72)
 Peerless Six (80)
 Pontiac Six
 Rickenbacker Six
 Rickenbacker Eight
 Star Four
 Star Six
 Stearns K Four (B)
 Stearns K Six (75)
 Stearns K Six (95)
 Continental Motors
 Engine Models W-5
 6-E 7-U 72
 8-S 8-U 9-K
 9-L 11-U 12-Z
 14-L 14-U 20-L

*A manufacturer of high grade Sixes and Eights—name on request.

More Replacement Business For You—

Last year over a million cars were factory equipped with Morse Silent Chains, making a total of over three million. That's some market and it's easier to sell Morse because you are simply following the judgment of most Motor Car Manufacturers.

Replace with original Factory Equipment. It fits the job exactly.

MORSE CHAIN COMPANY

Main Office and Works
 ITHACA, NEW YORK

Sales and Engineering Office
 DETROIT, MICHIGAN

MORSE

GENUINE SILENT CHAINS



There is money in North East Yellow Boxes

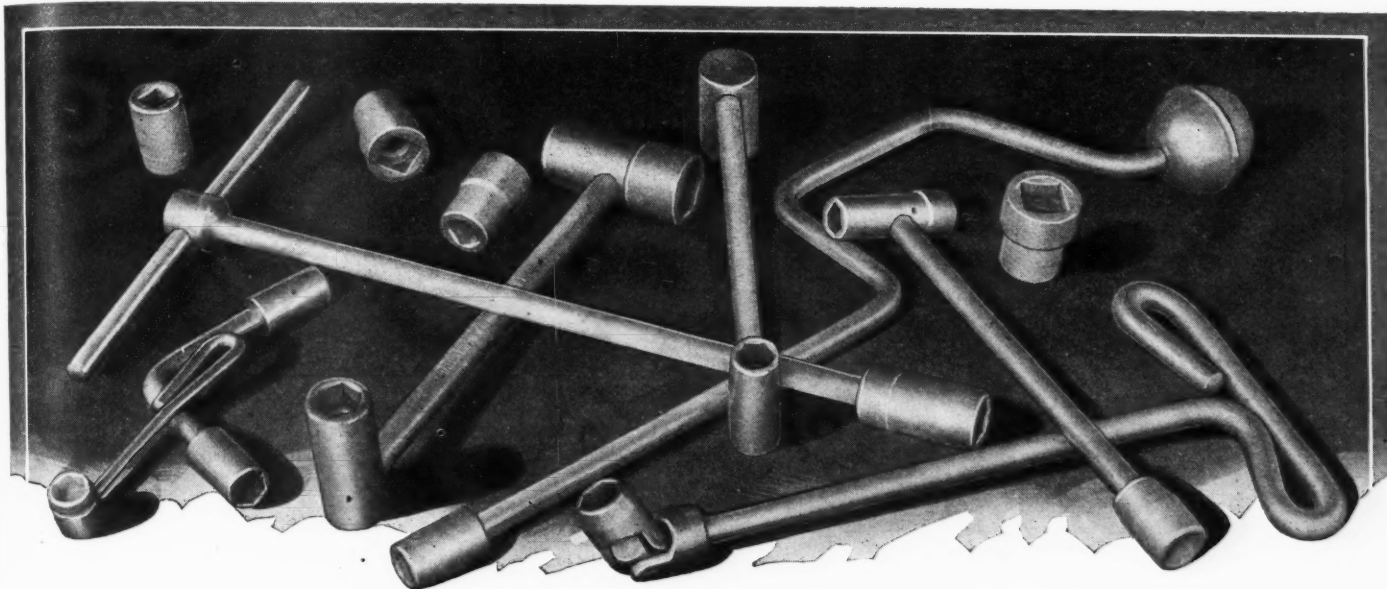
PRESENT discounts and Standard Package prices on Genuine North East Service Parts give you a solid profit that you can't afford to overlook.

Add to this profit the undeniable advantages of Genuine Parts—*customer satisfaction*—*elimination of "come-backs"*—*manufacturer co-operation*—and you have a combination of business-building factors that is hard to match.

Repair concerns, Parts Dealers and Garages who conform to the NORTH EAST Genuine Parts Policy are entitled to display the NORTH EAST GENUINE PARTS BULLS-EYE Window Sign.

Genuine North East Service Parts are distributed to the trade by Authorized North East Service Stations.





FLAT RATES

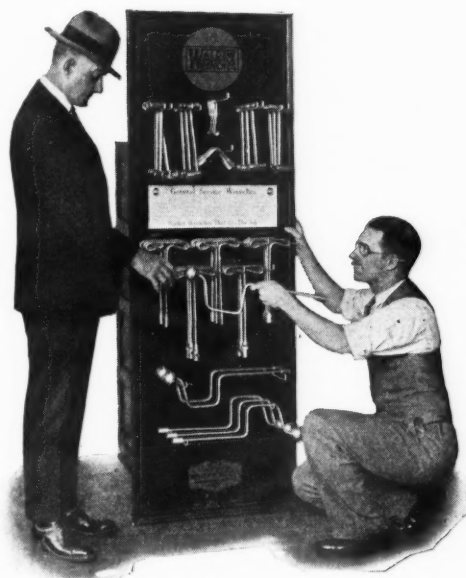
and Socket Wrenches!

Repair work now done on a **FACTORY** basis

Flat rates (set not by you, but by the factory) make it necessary for you to follow as much as possible the same methods in your shop as those in use in the factory.

Just as the factories use a specialized wrench for a specialized location, so should you have exactly the best wrench for any given job. Walden-Worcester wrenches will get on a nut or bolt-head instantly and set it up in the smallest fraction of time.

The Walden-Worcester catalog has nine pages listing the various types of wrenches best suited for each individual operation in the repair of popular makes of cars and trucks. Get this catalog by all means. Order Walden-Worcester Wrenches from any of our jobbers and in this way put your repair work on a factory basis. This is the 1926 way of handling repair work. Our catalog is mailed free to all.



WALDEN-WORCESTER

The original, and largest exclusive manufacturers of All Steel, Socket Wrenches, - in the World

475 SHREWSBURY ST.,

WORCESTER, MASS.,

U. S. A.

R.I.V. Ball Bearings



CLASS TELLS

In bus work R.I.V. ball bearings have *this year* won the largest fleets in the United States.

In truck work our husky bearings win permanent customers for our dealers by stopping troubles which no other bearings seem able to cope with.

Where specially *rough passenger car service* wrecks other bearings, our dealers are cashing in, because R.I.V. bearings stand the gaff of extensive thrust without whimpering.

On the West Coast—in the South—in the Middle West—in New England—all across the Dominion of Canada—the trade knows and even competitors agree that "R.I.V. has a lot of stuff on the ball".

Ours is a triple-A proposition—available for live bearing dealers in many important centers. Ask us about our "Stop-Loss" sales plan—NOW.



Broadway at 57th Street,
New York City

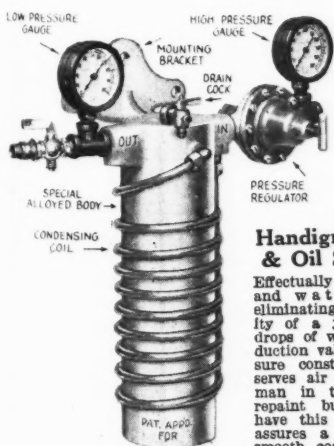
Branches: Detroit—San Francisco—Montreal



HANDIGRIP Makes Painting Any Handy Man's Job!

Attach a Handigrip spray gun to your compressor, with a Handigrip water and oil separator on the line and you are ready. Paint your trade-ins—and they will sell quicker. Paint them—and they sell for more money. At a total cost as low as \$2.00 per car you can add from \$20.00 to \$90.00 to the value. "Doll 'em up and move 'em." That is the way to do it.

\$35



Handigrip Water & Oil Separator

Effectually separates oil and water from air, eliminating any possibility of a job spoiled by drops of water. Air reduction valve holds pressure constant and conserves air supply. Every man in the spray gun repaint business should have this separator. It assures a perfectly smooth coat of paint or enamel. Separator, with regulator gages and tank. \$35.

One car out of every five needs refinishing. Suggest it to drivers of shabby cars. Advertise on your windows, "Old cars made to look like new." Many of those who store in your garage will want their cars repainted.

Handigrips are very simple to operate—any shopman can spray a full, smooth coat of paint, enamel or Duco. Handigrips drive liquid into cracks and holes that brush bristles can't possibly reach. Do as much work in 5 minutes as a man with a brush can do in an hour. Can be attached to any air compressor. (If you haven't air compressor, we can furnish one.) Also used with kerosene to clean engines, transmissions, differentials and chassis. Biggest \$35.00 worth you can buy. You can paint your building too.

Willys-Overland Co., Toledo, Ohio uses 50 Handigrips. The Hayes-Ionia Co., Grand Rapids, Michigan, have purchased 125 of them. Thousands in use.

Get into this repaint game. With a little aggressive advertising and personal work you can soon build a real profit-making addition to your present business. Write today for complete information.

PLUMMER-HUFF CO.

Napoleon, Ohio

HANDIGRIP Spray Gun

Plummer-Huff Co.,
Napoleon, Ohio
Please send me full details concerning your
HANDIGRIP spray gun painting equipment. I
have (or have not) an air compressor of the
following size.....bore.....stroke.....
Name.....
Address.....
City.....
State.....



A remarkable increase in battery sales with Prest-O-Lite

EVERY day more evidence comes in to prove that the Prest-O-Lite Merchandising Plan is making the sale of Prest-O-Lite Batteries more profitable.

Here is a letter recently received from Wilson Auto-Electric Service, of Troy, New York:

"Notwithstanding the fact that battery prices have continually decreased, our new battery gross sales for the 10-month period ending October 31st is greater than any other year.

"The Prest-O-Lite Merchandising Plan adopted by us August 1st is the direct cause of this increase. Battery sales during the three months since its adoption have been bigger than the total of the seven months preceding."

Prest-O-Lite Batteries offer you the same opportunities for increased business and bigger profits. The battery itself is absolutely right—already standard equipment on many of the country's finest motor-cars. It is priced right. It is nationally advertised. And the merchandising plan back of it has been proved to be thoroughly sound.

In addition to the motor-car business there is the radio business. Prest-O-Lite Batteries, made especially for radio, are great sales boosters.

Write to us for details of our selling plan and for our Service Station proposition.

THE PREST-O-LITE CO., INC.
INDIANAPOLIS, IND.

New York

San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto, Ontario

Prest-O-Lite

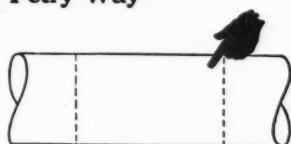


PETRY

Get this Straight—

Legislation is NOT aimed at the Proper Use of Cut-Outs—It is against their Misuse

The Petry Way



A Cut-Out Is a Necessary Adjunct to any Motor Car—and it saves money

A properly-designed cut-out like the Petry makes it possible for a car-owner to hear the action of his motor in his garage. Whether the valves are seating properly, an improper ignition, etc., and most important, correct ad-

justment of carburetor saving money and gas and giving a better working motor.

The Petry is the **EASIEST** of all cut-outs to install properly. Every mechanic knows it's easier to make two straight cross cuts in the exhaust-pipe, than to saw, then drill, then turn blade and hack or chip a square section out of an exhaust pipe, as with split type cut-outs.

Petrys enable you to make money on the Flat Rate basis. And as with Petrys the total cost to motorist is less, you can sell them to **MORE** people.

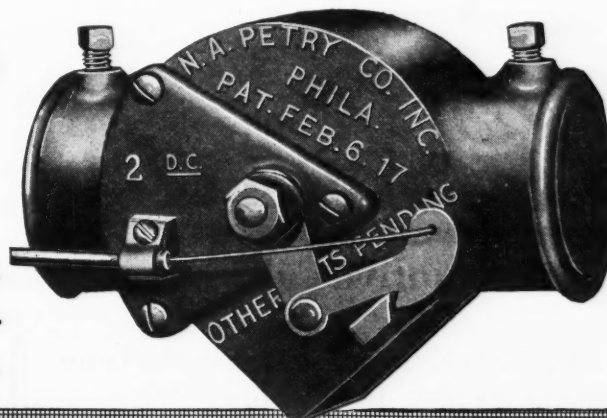
The Ordinary Way



DIFFICULT

Dash Type

With a part turn and a pull of the handle on the dash a driver can cut out his muffler and "listen in" on his cylinders.


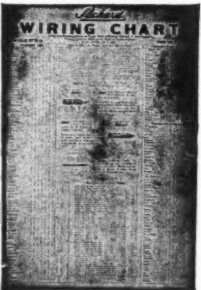


N. A. PETRY COMPANY, Inc.


340 N. Randolph St., Philadelphia, Pa.
Pacific Coast Representative, Norman Cowan Co.
445 Rialto Bldg., San Francisco, Cal.

Tuning Up

Valve

The Packard Wiring Chart shows the proper cable by trade number for every use on all American made cars and trucks.



This display card shows a complete line of Packard Cable in life size and color.

Cable remains in good condition on spools.

—AND NOW THE PACKARD MERCHANDISER

Another big step by Packard in making of cable a profitable line.

Admittedly cable has not been considered a very profitable line in days gone by. But don't forget that those days have gone by.

As the number of cars increase and as the age of many of them do the same thing, there is more and more re-wiring necessary. There is money in this re-wiring business today for the concern that is properly equipped to take care of it.

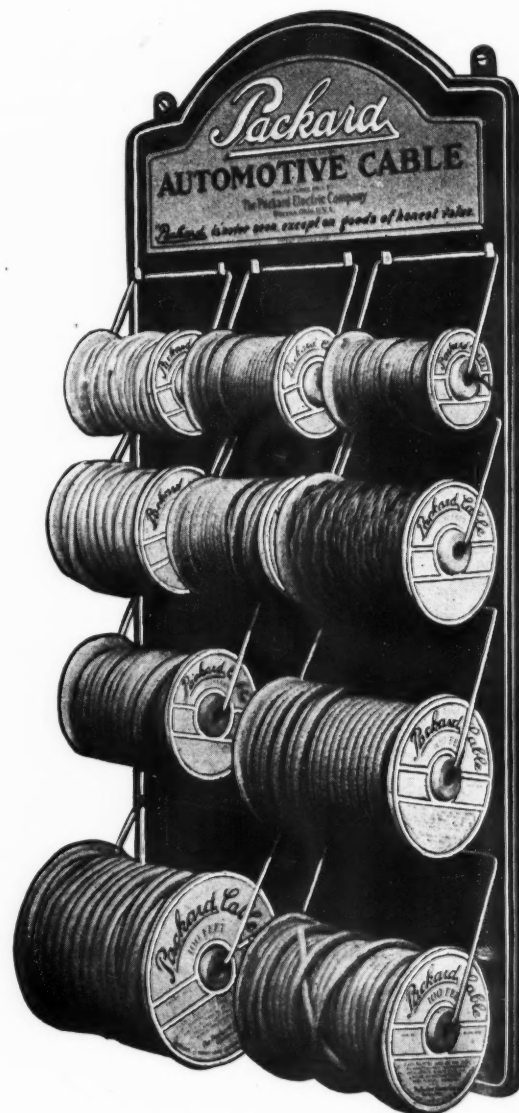
Being properly equipped means having the right kind of cable—knowing where it is and being able to get it without losing time. A Packard Merchandiser—Wiring Chart and Display Card will do the trick.

PACKARD ELECTRIC COMPANY
Warren, Ohio

Packard
Automotive Cables

Five hundred of the best Jobbers in the country are Packard Cable distributors.

Ask their salesmen for the complete story.



Packard is never seen, except on goods of honest value.

Move out your Trade-ins quicker with OPEX

the Perfected Lacquer

HOW many thousands of dollars do you have tied up in slow moving trade-ins?

How often do you run a special sale to dispose of these cars at a loss—just to gain floor space?

You know that, even if the motor and body are in A1 condition, nobody or nobody's wife, wants a car that looks shabby and run-down.

Unless it is a gift—and, frankly, not even then!

Stop giving cars away (practically). You can run your Used Car Department at a profit by installing a finishing booth at a nominal cost and operating expense.

You know that Lacquer is now considered *the* finish. Most important: Opex can be applied over the old finish. It can be applied economically at the rate of one coat per hour. And the automobile looks like new.

You should know more about our Opex proposition. If you haven't a refinishing booth, you are losing quick profits on your trade-ins.

Illustrations such as this are appearing periodically in the Saturday Evening Post and are broadcasting the story of Opex throughout the nation. Consumer demand is the dealer's cue.



SHERWIN-WILLIAMS

OPEX



Send coupon for details

THE SHERWIN-WILLIAMS CO.,
420 Canal Road, Cleveland, Ohio.
Supply us, entirely without obligation, full details
of your Opex perfected lacquer proposition.

Name _____
Street _____ Place _____



**More
Profits**

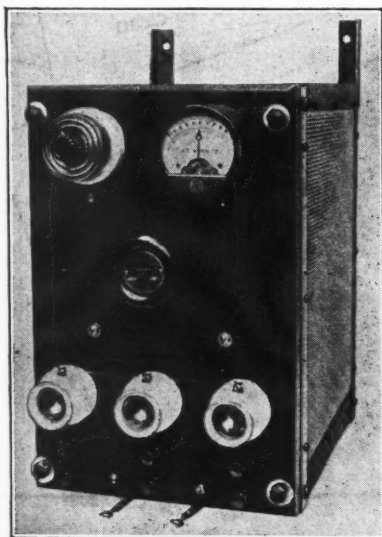
Keep All the Profits On Your Battery Charging Business

You can save time, labor and profits by keeping the battery charging business of your customers in your own plant.

Install an ACME Dreadnaught Charger and let it earn more profits and more satisfied customers for you.

The ACME Dreadnaught type AD-6 shown above charges six 6 volt storage batteries at one time. Ideal for the small plant. On line current interruption automatically restarts. Absolutely reliable and efficient.

\$50 Complete with bulbs.
\$60.00 West of the
Rockies.



The ACME Dreadnaught AD-12 has a capacity of twelve 6 volt storage batteries at one time. Most advanced design — recommended by foremost battery engineers. Exceptionally efficient and economical in current consumption. Bulb Type. Transformer has double winding. Operates on A. C. 60 cycles 110 volts. On other frequencies write for prices.

\$75 Complete with bulb.
\$90.00 West of the
Rockies.

Let us show you how easily and quickly you can handle this new business—also our Time Payment Plan.

Mail this coupon, without obligation.

The Acme Electric & Manufacturing Co.

The Acme Electric & Manufacturing Co.
1420 Hamilton Avenue, Cleveland, Ohio.

Send to me without obligation full information on your Acme Chargers.

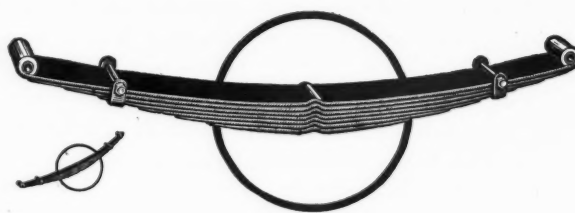
It is understood that I have the privilege of a 5% discount if desired.

Name.....Address.....

Individual.....Town.....

TUTHILL TITANIC

ALLOY STEEL SPRINGS



Why the Hump Center?

Have you ever wondered why Tuthill Titanics have a hump center instead of the usual center-bolt?

Get a pencil and a piece of paper. Draw a curved line to represent a spring leaf. Put a dot at each end to represent shackles and a dot at the center where the axle rests. Do you see where the load is carried? At the center, of course. And ordinary springs break right there because the center has been weakened by a center-bolt hole or nib.

That's "why the hump center." Tuthill Titanics are extra strong where the strain is greatest—that's why they are so hard to break.

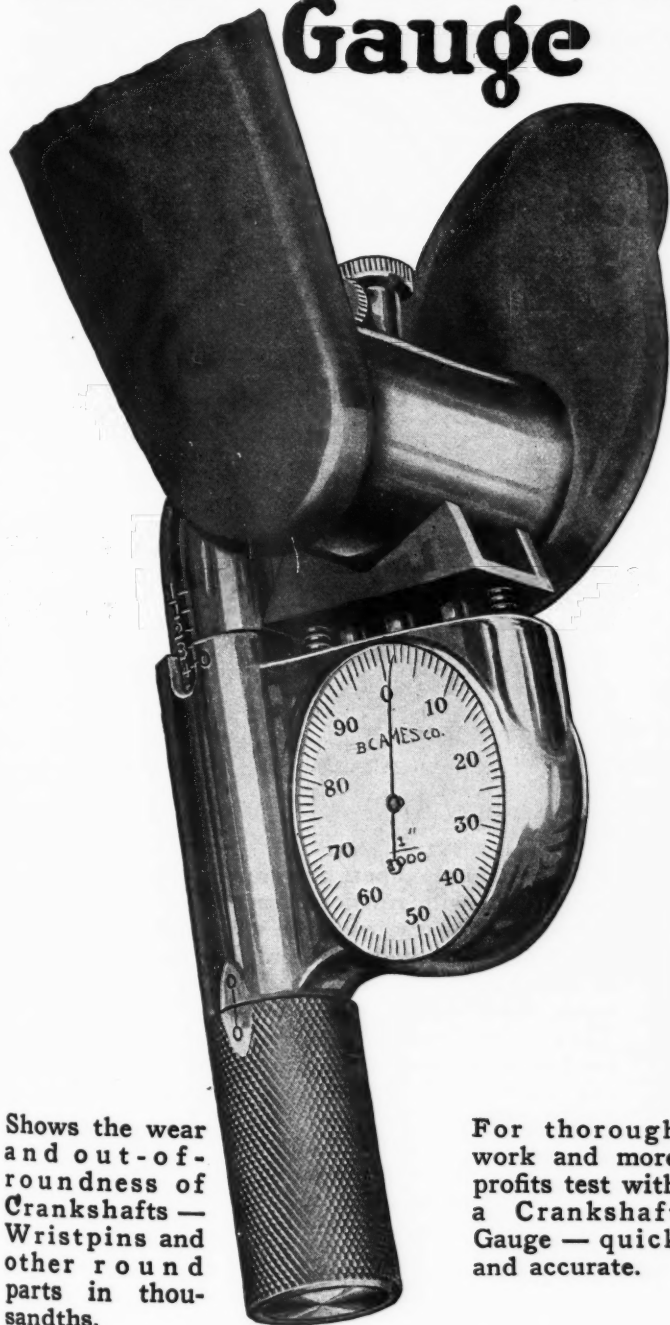
To prove our point—that hump center is guaranteed forever against breakage.

*Write Today for the Tuthill
Service Station Plan*

TUTHILL SPRING COMPANY
DEPT. 579 · 760 POLK STREET · CHICAGO, ILL.

ESTABLISHED 1880

AMES Crankshaft Gauge



Shows the wear and out-of-roundness of Crankshafts — Wristpins and other round parts in thousandths.

For thorough work and more profits test with a Crankshaft Gauge — quick and accurate.

Buy from your Jobber
or send for folder

B.C. AMES CO. Waltham, Mass.

"Largest Makers Dial Gauges in the World"

GF Allsteel

The Complete Line of Office Equipment

Allsteel Shelving For Auto Accessories

LIGHT, strong, fire-resistant—quickly erected or re-erected without special tools—and giving 10 to 30% greater storage space.

To fit growing needs, additional units may be added later—or the entire installation moved and re-erected elsewhere.

Allsteel Shelving makes the finding and placing of auto accessories remarkably easy. And the Allsteel mark on the shelving you buy is a guarantee that you've made a permanent investment.

Write for a copy of "Saving with Shelving"

THE GENERAL FIREPROOFING CO.
Youngstown, Ohio

Dealers Everywhere • Canadian Plant: Toronto, Ontario



Attach this coupon to your firm letterhead (M.A.)
The General Fireproofing Co., Youngstown, Ohio.

Please send me without obligation a copy of your book "Saving with Shelving."

Name

Firm

Street No.

City

State

Conneaut Plastic Metallic Packing



Is Dependable on Leaky Motor Water Pump Shafts

It comes in putty form, and insures a perfect fit to the worn shaft by tightening the gland. It makes an adjustable metal bushing that may be tightened to take care of natural wear, like a fibre packing. It is easily formed with the fingers to fit stuffing boxes of any size or shape.

Conneaut Plastic Metallic Packing is a permanent repair, even after the shaft and bushings have become badly worn. It pays in economy and satisfactory service.

Put up in one and five-pound cans.

Ask your jobber, or write us for further information

**CONNEAUT PACKING
COMPANY**

Conneaut,

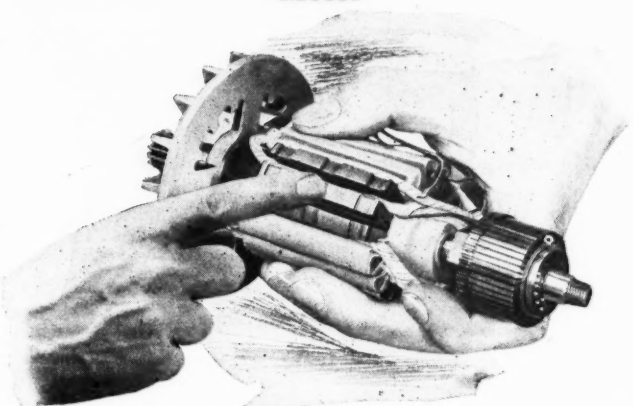
Ohio

It Belongs in Every Shop

Thor

Construction Makes Portable Electric Drills Pay Their Way

(This is another of a series of advertisements showing Thor superior construction. Ask for booklet "Inside Facts" and get the whole story)
FIFTH—Now, consider Thor's Remarkable Motor



The Thor uses open rectangular slots — not round ones with restricted entrance. The open slot allows the use of more wire and insulation than any other shape. Therefore, there is room in the Thor for coils of double silk-covered wires, hand wound and taped.

The slots are insulated and coils are separated by insulation, so that it is impossible for wires of one coil to work into contact with the other coil in the same slot.

The coils are insulated, hand wound and formed, just exactly the same as in big stationary motors. And the windings, by special Thor process of impregnation, are made moisture proof, oil proof and dust proof.

As a safety feature, all Thor Electric Tools have a ground wire.

SHOCKS ARE IMPOSSIBLE!

INDEPENDENT PNEUMATIC TOOL COMPANY

GENERAL OFFICE: 600 W. JACKSON BLVD., CHICAGO, U.S.A.
FACTORY: CHICAGO, ILL.
SALES: THE WORLD OVER

EASTERN OFFICE: 145 BROADWAY, NEW YORK, N.Y.
LONDON OFFICE: 40 BROADWAY, WESTMINSTER, LONDON S.W.1, ENGLAND

BRANCHES: CLEVELAND, OHIO; PHILADELPHIA, PA.; PITTSBURGH, PA.; BIRMINGHAM, ALA.; SAN FRANCISCO, CAL.; DETROIT, MICH.; ST. LOUIS, MO.; BOSTON, MASS.; LITTLE ROCK, ARK.; MILWAUKEE, WIS.; ST. PAUL, MINN.

Thor PNEUMATIC DRILLS AND REAMERS, WOOD BORING MACHINES, CLOSE CORNER DRILLS, HOIST GRINDERS, BUSTING HAMMERS, CHIPPING CALKING FLUE BEADING AND SEALING HAMMERS, SAND HAMMERS, RIVER BUSTERS, CORE BUSTERS, CLAY DIGGERS, AIR MOISTURE SEPARATORS, PNEUMATIC TOOL ACCESSORIES, HOSE AND COUPLINGS.

ELECTRIC DRILLS, REAMERS, TAPPERS, GRINDERS AND SCREW DRIVERS.

PNEUMATIC TOOLS **ELECTRIC DRILLS**

1893

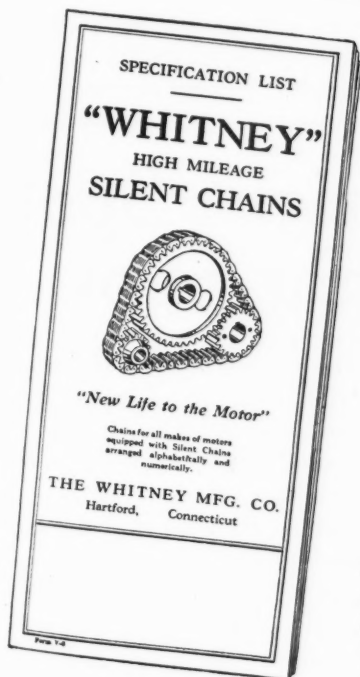
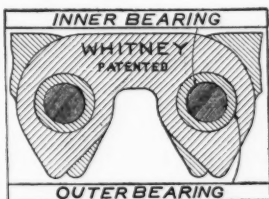
FOR THE LIFE OF THE MOTOR

is the usual duration of a timing chain replacement when the job is done with

"WHITNEY" SILENT MILEAGE CHAINS

It's all in the joint construction

The "Whitney" Double Bearing Pin and Bushing Joint provides a bearing of the hardened rivet on the inside of the bushing, and a bearing of part of the chain links on the outside of the bushing. As a result the total projected bearing area of this joint is nearly twice as great as that of any other silent chain joint.



We have a brand new edition of this book just off the press. It includes all the new cars using front end chains.

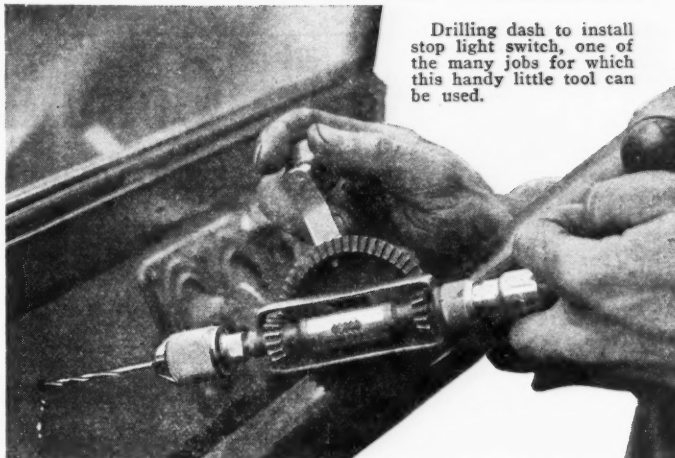
Ask your jobber or mail us the coupon below.

The Whitney Mfg. Co.
Hartford, Conn.

I want that book on chain specifications.

Name.....

- ☐ Service Station.....
☐ Fleet Owner.....
☐ Parts Jobber.....



Drilling dash to install stop light switch, one of the many jobs for which this handy little tool can be used.

A Midget in Size A Giant in Service

"Yankee" Hand Drill No. 1530 is so small you can carry it in your pocket, yet it has all the famous ratchet adjustments of the big "Yankee" Breast Drills and Hand Drills.

It works in places impossible for other drills, by means of five ratchet adjustments (controlled by a finger touch).

In a cramped place, where you can not give the crank a full turn, you set the shifter at DOUBLE Ratchet, and by turning the crank only an inch to and fro, you keep the bit cutting into the work.

Only a "Yankee" Drill can do this, for no other has the famous "Yankee" DOUBLE Ratchet.



The picture above shows you how easily you can get any of five ratchet adjustments on the little "Yankee" Hand Drill No. 1530.

"YANKEE"

Hand Drill No. 1530

is only 10½ inches long and weighs but 1¼ pounds. 3-jaw chuck holds round drills up to 3/16 inch.

For large drilling jobs use "Yankee" Ratchet Breast Drill No. 1555, 3-jaw. Holds round drills up to ½ inch.

Some other "YANKEE" Tools

Ratchet Breast Drills
 Brake Lining Cutter
 Automatic Feed Bench Drills

Automatic Feed Chain Drills
 Ratchet Tap Wrenches
 Vises, with Removable Base



Have You a Copy?

Every mechanic finds this free "Yankee" Tool Book interesting and profitable. It shows all "Yankee" Tools, their construction and operation. Write for your copy today.

Dealers Everywhere Sell "Yankee" Tools
 "Yankee" on the tool you buy means the utmost in quality, efficiency and durability

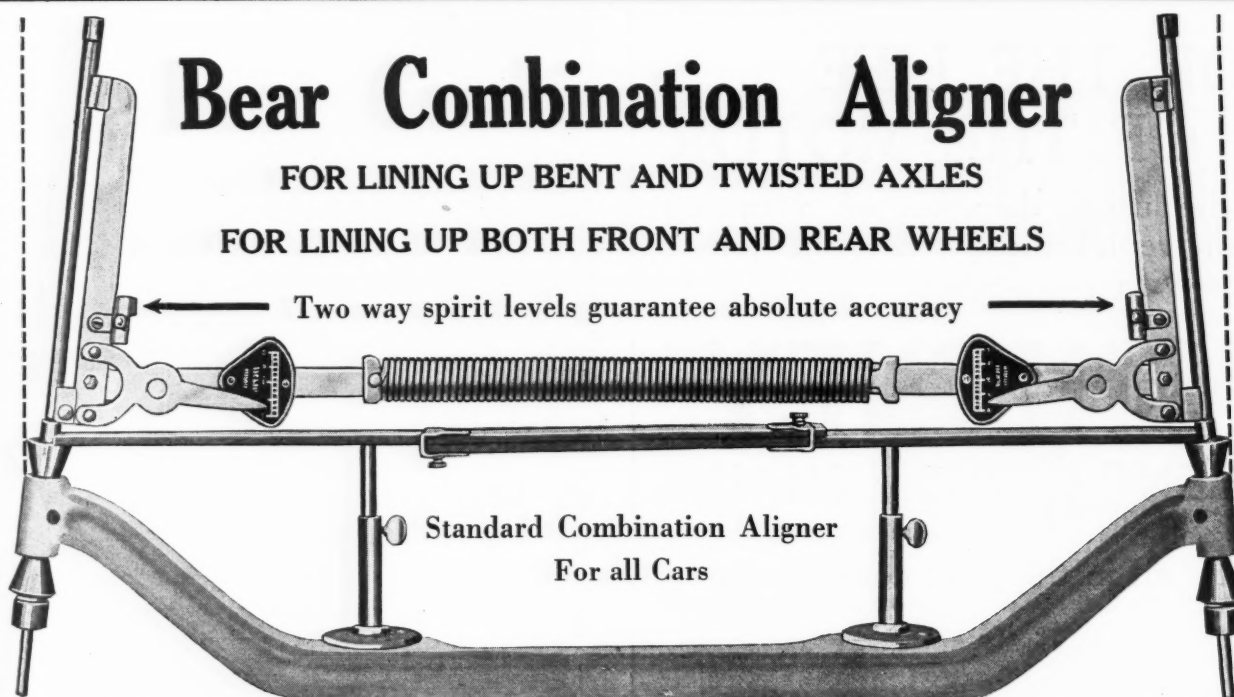
NORTH BROS. MFG. CO., Philadelphia, U.S.A.

"YANKEE" TOOLS
Make Better Mechanics

Bear Combination Aligner

FOR LINING UP BENT AND TWISTED AXLES

FOR LINING UP BOTH FRONT AND REAR WHEELS



Two way spirit levels guarantee absolute accuracy

Standard Combination Aligner
For all Cars

This Combination Aligner consists of the Bear Automatic Wheel Aligner and the attachments necessary for lining up axles. In lining up wheels, the wheel aligner only is used but where axles are straightened the attachments are used as shown.

When lining up wheels the Aligner automatically registers on the dials the Pitch or Toe-in.

When lining up Axles the Aligner automatically registers the exact degree of pitch or angle of both spindle bolts or king pins in the axle.

REGISTERS AUTOMATICALLY WITH MICROSCOPIC PRECISION—NO GUESS WORK

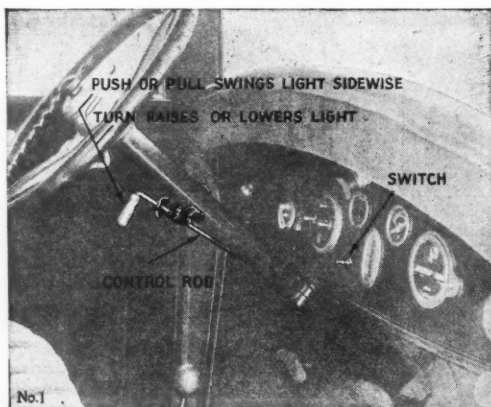
The information chart furnished on wheel alignment shows the correct Pitch and Toe-in on both high pressure and balloon tire equipment on practically all cars. The chart furnished on axles shows the degree of Pitch in the king pin or spindle bolt. In both charts the specifications vary greatly. Therefore, these charts are very important and valuable and absolutely necessary.

Standard Aligner only, for all cars.....\$17.50

Combination Standard Aligner and Axle attachments. \$32.50

Manufactured By

BEAR MANUFACTURING CO., ROCK ISLAND, ILLINOIS



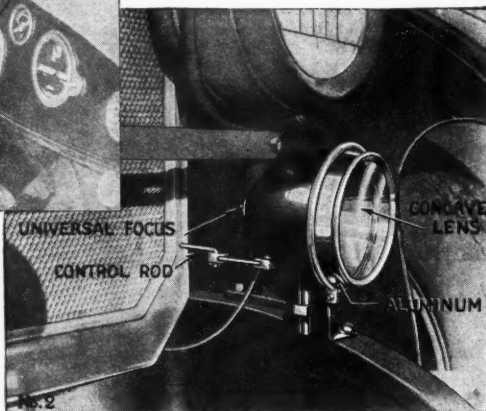
An Easy Installation

The Farwell Safety Road Light is easily attached to any car. No special tools required.

Special Offer

To insure a wide distribution this season, a special offer to JOBBERS AND CAR DISTRIBUTORS is made which will enable them to prove the wonderful selling qualities of this light without investing a cent. Write today.

Puts the Bright Spot in the Right Spot



Here is the "down-in-front" light that the motorist has been waiting for. It can be turned to any angle or direction by a simple, easily operated control on the steering column. Simply and strongly built. Will not rust, work loose, rattle, or give trouble. Enhances the appearance of any car. Does not reflect back or obstruct view of occupants of car. A powerful, clean-cut beam when directed it does not dazzle an approaching driver.

\$12⁵⁰

Manufactured by

THE FARWELL MFG. CO.

Toledo, Ohio



Do-Ray Ditchlight

There's Big Money in the Do-Ray Line

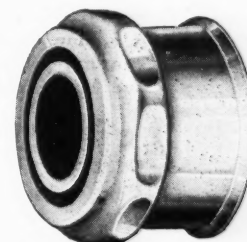
Do-Ray Ditchlight—list price only \$5—hits the spot for profits and sales. Selling now at the rate of 1,000 a day. For all cars. Heavy Malleable Universal Brackets. Black enameled with two nickeled bands. Silver plated reflector. Monogram lens. Fits four places on any car, namely—tie rod—splash apron—thru radiator—on bumper.

Dodge Replacement Drum Type Headlamp. 1915 to 1926 models inclusive. Spreadlight Lens. Black and nickel. Silver plated reflector. Fast turn-over.

Write for Catalog and Prices of Complete Line

Also Dodge, Hudson, Essex, Ford and Chevrolet Hub Caps. Duplicates of original equipment. 100,000 sets already in use. Big re-order business.

We produce the most complete line of replacement headlamps, reflectors, lamp doors, lamp parts and hub caps for resale in America. Get in touch with us today.

Dodge Replacement
Drum Type HeadlampReplacement Dodge Hub
Cap — Red Spot With
Black Inlay

1458 S. Michigan Ave.

Chicago, Ill.

High Pressure HEAVY DUTY One Man Speed Gun

Can Generate
10,000 lbs.
Pressure.

Fills by Suction,
Discharges
Automatically.

Former Price
of the GREASOFAST Gun &
Hose \$16.50

Now \$9.00

(Gun and Hose)

TERMS: Bank Draft, Certified Check, Express or Post Office Money Order with Order — We Will Ship C. O. D. but must Add 5% to Cover Additional Expense to Handle C. O. D's.

NOTICE: All orders will be filled in rotation as received. Shipments will be executed as soon as possible. We will refund your purchase price if everything is not as represented herein. Complete satisfaction guaranteed.

The
Alemite, Zerk
or Dot Systems

can be connected to and operated with this gun. When you order state which connection you want shipped with the gun. Connections are extra.

The Prices Are:

Connection for Alemite System..	.45
Connection for Zerk System .....	.85
Connection for Dot System	1.50

Order Now! Guaranteed against any imperfections in material or workmanship. A handy, speedy, economical device that insures positive lubrication for automobiles, trucks, tractors and machinery of every description.

Garages, Auto Dealers, Filling Stations, Grease Racks, Auto Repairers and Industrials in all parts of the United States are now equipped with "GREASOFAST" Guns and Hose.

The "GREASOFAST"

High Pressure Grease Gun

For Heavy Duty Greasing Service
and the

Indestructible Universal Ball Joint
Steel Pipe Leak Proof Hose

DROLET & O'BRIEN CO.

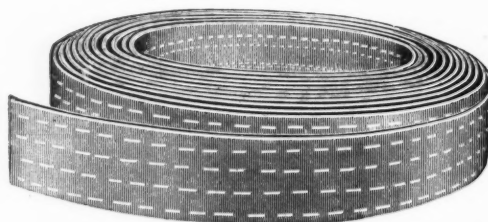
Telephones Harrison 4117
7964
Dept. 24

An Illinois Corporation
209 South State St.

Telephones Harrison 4117
7964
Chicago, Ill.

WET OR DRY, "A-SAW-CO" HOLDS

**BEST FOR
PLEASURE CARS
TRUCKS AND
MOTOR BUSES**



**GIVES LONG WEAR
EFFICIENT SERVICE—
DOES NOT ABSORB
GREASE**

"A-SAW-CO" brake lining is made by a new patent-protected method, whereby a superior asbestos woven wire cloth is made, and the cloth is impregnated with a special compound before it is cut and folded into sizes desired. By this method, you will find a constant impregnation throughout every particle of "A-SAW-CO," as compared with a veneer of compound in the woven and other types of lining.

"A-SAW-CO" is WATERPROOF and GREASE PROOF, due to the character of the compounds and the manner of impregnation. It is not therefore affected by weather conditions.

"A-SAW-CO" gives long life, and gives efficient braking service all the time. It contains no rubber or gum, and its cotton content is so small that it cannot burn. It has more density than most linings, and therefore has been able to satisfy the hardest and most critical users. It is standard equipment on some of America's best known pleasure cars, and is used for replacement purposes throughout the country.

There is still some important territory open for Live Distributors. Write for our proposition.

ASBESTOS SPINNING & WEAVING CORPORATION

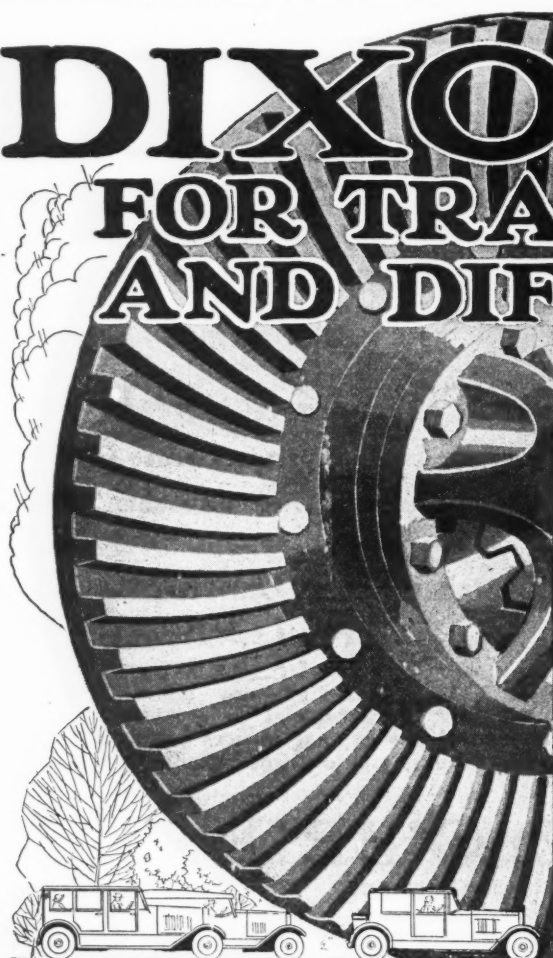
Main Office: 16 Beaver Street, New York

Fen-Murr Co.
2420 Indiana Ave.,
Chicago.

Pacific Coast:
Asawco Products Co.,
1517 W. Pico St.,
Los Angeles, Calif.

Brake Equipment Co.,
3609 Gratiot Ave.,
Detroit, Mich.

DIXON'S 677 FOR TRANSMISSIONS AND DIFFERENTIALS



Protects gears by providing a durable graphite film that reduces friction and wear.

Dixon's 677 clings to gear teeth and eases gear shifting as it is not affected by heat or cold.

Recommend Dixon's 677 and assure your customers of freedom from lubrication worries.

*Write for our dealer
proposition No. 82-G.*

Joseph Dixon Crucible Company
Jersey City, N. J. Established 1827





THE MAN

Figures That Tell a Story of SUCCESS



*Which any Live Mechanic
Can Duplicate*

Overhauling Jobs Done by Cross Garage

*Cross says the Hutto
Grinder builds busi-
ness for him—it will
for you, too.*

PERIOD	FOURS	SIXES	EIGHTS	TOTAL
Sept., 1923, to	\$4290.00	\$3570.00	\$240.00	\$8100.00
Feb. 26, 1926	(66x\$65.00)	(42x\$85.00)	(2x\$120.00)	

Cylinder Grinding, 532 bores at \$3.00 per bore, or \$1596.00 included

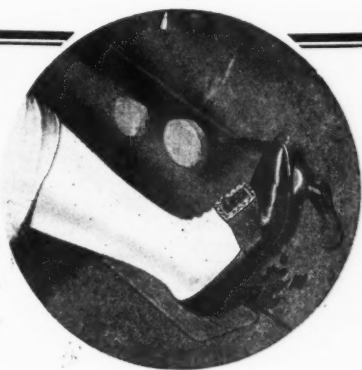
Almost Twenty Per Cent for Grinding Alone

HUTTO ENGINEERING CO.

523 Lycaste Ave., Detroit, Mich.



THE TOOL



Always Before

The ADAMS Adjustable FOOT-REST Sells for Comfort

Women drivers particularly appreciate the comfort and feeling of safety they get from handling cars equipped with Adams Adjustable Foot-Rest.

It brings the accelerator to a convenient position for any man or woman, and it is quickly adjustable to suit the requirements of more than one driver of the same car.

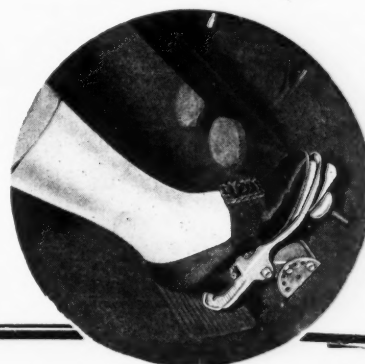
There is no cutting or mutilating of the floor boards. It fits on the regular accelerator without extra parts.

An attractive display stand helps it sell. In two models—Senior \$3.50; Junior, \$1.25.

Ask your jobber

The Adams Mfg. Co.
Galesburg, Illinois

—And Now



"EXPERIENCE"

WHEN you go to an insurance man with an unusual risk that you want covered you are generally told, "I'll look up our experience on that and let you know what we can do." He then gets in touch with a central bureau where his own and perhaps other companies pool their information on such risks, and he finds out just how such cases have worked out in the past. With the facts in hand he is then prepared to handle the situation intelligently.

One of the reasons **MOTOR AGE** is published is to do the same thing for the automobile dealer that the central bureau does for the insurance man. It is to make available the experience of the trade—to show you how other men have met problems like your own, and how their methods have worked out.

Fortunately, there is an ample body of "experience" to be found in the automotive field. The only problem is that of placing it in the hands of the average dealer, and that is what **MOTOR AGE** is doing. Each week we present one or more articles showing just how some particular dealer met and overcame a typical situation and in our "Clearing House" is to be found the information given men who approached us with particular problems of which they wanted to get the experience of others.

You, too, can keep in touch with the experience of your trade by reading **MOTOR AGE** carefully each week. And when you need help in meeting some particular problem, don't hesitate to call on us.

Sure! You'll Get the Job

**\$200 Savings
in Rear Axles**

**Others in
Proportions**



**Get This—
Surplus Stock Book FREE!**

Bigger Profits—Lower Quotations—More Jobs. That's what will happen when you get this Catalog. Surplus stocks of Factories pressed for money and quantity purchases makes our low prices possible. National advertised products, all new except where specified—Timken Axles—Timken Bearings—Standard Timing Gears—Brown-Lipe Transmissions—Pistons—Rings. Hays and Firestone Wheels and Rims, Etc. All Sensational Bargains.

DEALERS—Garagemen—Write Today!

WARSHAWSKY & COMPANY

World's Largest Replacement Parts House

1915-35 So. State St., Dept. MA-4 CHICAGO, ILL.



Fall River Pass, on Two-Day Circle Trip to Rocky Mountain National Park



Berthoud Pass, Continental Divide

*You'll Enjoy Motoring
in* **COOL COLORADO**

The three highest auto highways in the world—Pikes Peak, Fall River Pass and Berthoud Pass, are in scenic Colorado. There are two National Parks—Rocky Mountain and Mesa Verde—and fifteen National Forests with 500 lakes, 6,000 miles of fishing streams and over 8,000 miles of scenic auto highways. Denver has the largest and most improved auto camp in the world at Overland Park. There are 180 auto camps scattered thruout the state.

There are plenty of conveniently located hotels, resorts and mountain cottages at prices you want to pay, or, you can select your own camp-site.

WRITE FOR COLORADO VACATION BOOKLET

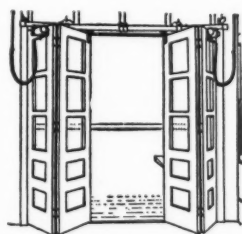
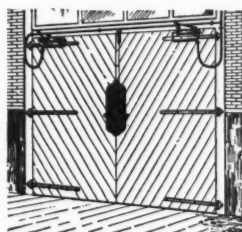
that tells Where to Go, What to See and How to enjoy Cool Colorado.
534 Seventeenth Street - DENVER, COLO.

**TOURIST
AND PUBLICITY
BUREAU
DENVER
CHAMBER OF
COMMERCE**

AIR-DOR

Controls

OPEN YOUR DOORS WITH AIR



They are the least expensive and most efficient means of handling garage doors. They operate 100 times for 4c. That's cheaper than doing it yourself, or wasting your workmen's time.

1. Require only 1 1/2" of head room above the top of the door for installation.
2. Operation is adjusted to any desired speed.
3. Running cost is practically nothing.
4. One door may be adjusted to close ahead of the other to allow for a latch or rabbet.
5. Operate from as many places as desired.
6. Action can be reversed from any position either in opening or closing.
7. In no way interfere with manual operation of doors.
8. Positive checking power prevents slamming.

WRITE US FOR PRICES (giving sizes and types of doors) and ask for conclusive proof that AIR-DOOR Controls handle all kinds of garage doors better than any other manual or mechanical power—AND AT A SAVING.

MICHIGAN METAL PRODUCTS CO.
BATTLE CREEK, MICHIGAN

Eye catchers for your window

Get a dash of color in your window or on your counter by means of these attractive Crescent Tool display cards and you'll find a good percentage of farmers, motorists and other tool users interested in spring overhauling will buy their Crescent Wrenches, Pliers and Screwdrivers in your accessory department.

The cards are 8 inches wide and 10 inches high. They are printed in orange, green and black, each card featuring one of the popular leaders in the Crescent line.

The complete set will be supplied without charge to all dealers handling Crescent Tools. Write to us for them.

CRESCENT TOOL COMPANY
208 Harrison St., Jamestown, N. Y.
Originators of the Crescent Wrench

CRESCENT TOOLS

Free yourself from this "No charge" service

and make a handsome profit ridding yourself of this costly nuisance.

Car distributors are freeing themselves from three fourths of this "no charge" service by giving springs the protection they deserve. These men install Reliable Spring Covers, when they sell the car.

Reliable Spring Covers are made in three types . . . for oil, grease and plain. The only lubricating type of spring cover with lubricant reservoir, insuring lubrication from end to end of springs. Write for Prices and Literature: **THE RELIABLE SPRING OILER CO., Columbus, Ohio.**



RELIABLE

Spring Covers
KEEPS SPRINGS YOUNG

HERE IT IS!

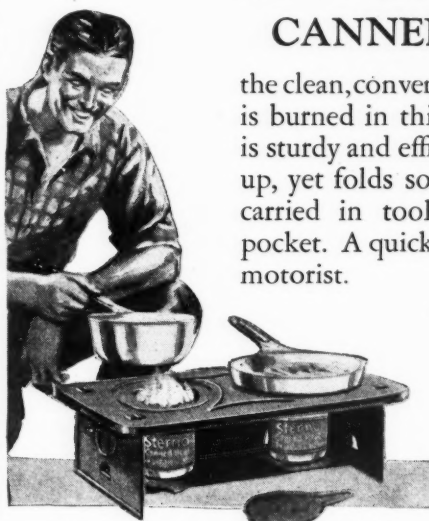
More business for the automobile trade through this marvelous

2-Burner Folding
Camp Stove 50c *Retail*

STERNO

CANNED HEAT

the clean, convenient, solid fuel, is burned in this stove, which is sturdy and efficient when set up, yet folds so flat it can be carried in tool box or side pocket. A quick seller to every motorist.

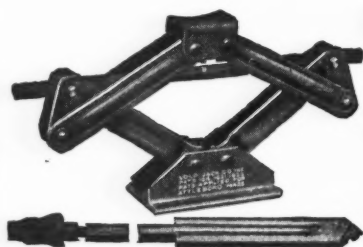


*Dealers and Jobbers
write for prices*

STERNO CORPORATION
Dept. 512
9 East 37th Street
New York City

Serno is manufactured under U. S. Govt. Permit for use only as a Fuel

Never Before a Jack Like This



**CONCENTRATE
YOUR
AUTOMOBILE
JACK
INVESTMENT**

The **MASTER
SO-LO^{PATENTED} Jack**

Operates from 4¾" low to 15½" high.
Ideal for Balloon tires—equally good for ordinary tires. Powerful and strong.
Make So-Lo Jack your standard high grade jack to offer all car owners.

LIST PRICE \$6.00

West of Mississippi \$6.50

SO-LO JACK CO., Inc.

ATTLEBORO

MASSACHUSETTS

SALES OFFICE:

108 Massachusetts Ave. Boston, Mass.

Export Agents: **AMERICAN STEEL EXPORT CO.**
Woolworth Building, New York City

**"The World's Largest
Producers of Washers"**



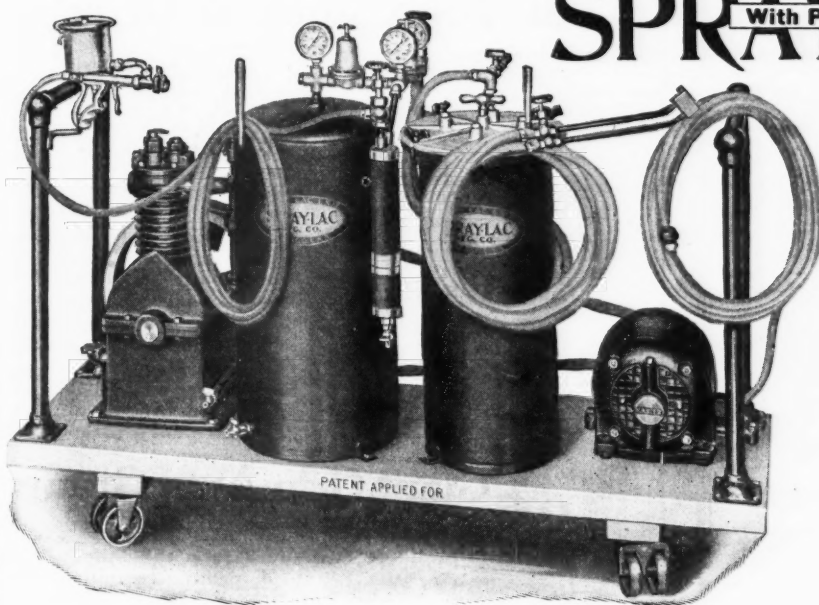
**MILWAUKEE
WROT WASHERS**

WROUGHT WASHER MFG. CO.

MILWAUKEE

Established 1887

WISCONSIN



SPRAY-LAC UNIT

With Pressure Material Container

A Complete, Portable Unit for Applying
LACQUER and PAINT REMOVER

It Will

Spray any paint and lacquer
Spray paint remover and cleaners
Operate duster, inflate tires, etc.
Attach to any lamp socket

For Automobile Painters

The Spray-Lac Unit will remove paint by simply spraying a special remover onto the surface, then adding air and water to wash up, leaving surface ready for paint or lacquer to be applied from feed cup or gun.

For Decorators and Manufacturers

It will spray any kind of paint and lacquer either from feed cup on gun or from pressure material container. It comes to you complete, ready for immediate use.

Sold With An Absolute Guarantee

You take no risk in buying a SPRAY-LAC UNIT. We guarantee that if you are not satisfied with the work it does—if it does not do all we claim for it—it can be returned to us within 5 days from the time you receive it and your money will be refunded. ORDER DIRECT from this ad, or write today for free descriptive folder.

Dimensions—40 in. high; 56 in. long; 17 in. wide; Weight, 413 lbs.
Complete READY FOR IMMEDIATE USE **\$265.00** F. O. B. CHICAGO

\$25.00 with Order. Balance on Delivery

READ WHAT CHARLES CORNS' AUTHORIZED DUCO AUTO REFINISHING STATION, 305 SHORT ST., LAWRENCEBURG, IND., SAYS:

"Please send me five more gallons of your paint remover. I am having good success with the Spray-Lac Unit and am getting out some beautiful work, so if anyone wants reference as to how well it will do the work, tell them to write to me."

SPRAY-LAC MFG. CO.

Not Incorporated

5639 Harper Avenue Chicago, Illinois

The Only Autowline that is:

- (1) Made of the famous, nationally advertised Yellow Strand Wire Rope.
- (2) Equipped with Patented Snap Hooks that are the last word in simplicity and efficiency.
- (3) Well established because it has been backed by years of national advertising.
- (4) Strong enough to stand a 6000 lb. pull and yet weighs only 4½ lbs. and coils neatly under a seat cushion.

BASLINE AUTOWLINE pays Jobbers and Dealers a good profit, too. Write for Price List and descriptive literature.

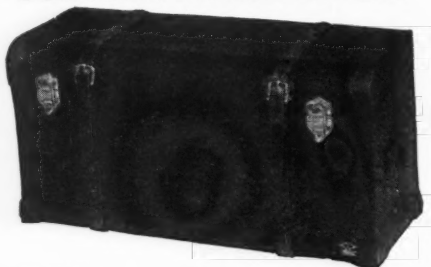
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Eastern Office and Warehouse—76 Warren Street, New York City

BASLINE AUTOWLINE



LORENZ TRUNKS

AND TRUNK EQUIPMENT
SPECIALLY DESIGNED
FOR EVERY MAKE OF CAR

Tukaway
TrunkDesigned
by
Lorenz

**THREE
BIG
TRADE GETTERS** { **Tukaway Brand Trunks
Big Chief Brand Trunks
Super-Steel Brand Trunks**

COMPLETE UNITS
Consist of Lorenz Trunk, Carrier
and Bumperets.

BUMPERS
Front Bumpers to match Lorenz
Bumperets.

SELLING JOBBERS ONLY
Write for New Catalog Sheets



Designed, Manufactured and guaranteed by

Lorenz Trunk Works, Inc.

Founded 1893

Factory and Warehouse Automotive Division
211-213 First Avenue North Minneapolis, Minn.

Put Your Stock in Order

Guaranteed Unbreakable Gear Shift Lever Ball



Price
\$1.25

One of the fastest selling and most popular sellers in the Rainbo Line. Made in all combinations from 11 basic colors. Counter display box and card provided. Complete with bushings. 2" in diameter. Highly polished. An accessory that dresses up and adds an air of smartness to any car. A money maker!



Price
\$1.00

Giant Grip Auto Grams

Here is one of the most successful small products introduced into the automotive market. Beautiful, distinctive initials for the motor car. Nickel-silver with blue Duco background. Cement, guaranteed to hold, furnished. Free display cabinet with assortment of 36 pair, and counter cards to help boost sales. Stock exchange privileges granted to balance supply of letters on hand. Write for details.

Order from your jobber or direct

Rainbo Accessories Co.

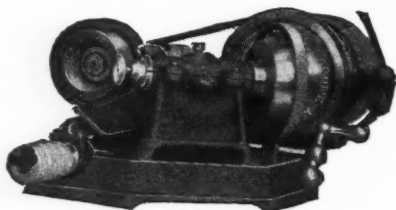
1420 S. Michigan Ave.

Chicago

You Can Bank Profits Now Lost In Wasted Efforts!



No longer do you need to take from one to three hours for a valve regrounding job. A Crowe Cup Wheel Valve Refacer will turn out first-class work on any valve in about thirty seconds. And the quality—the efficiency of the job will be 100% more than you could possibly get from hand operation.



Ruggedly and simply built, a Crowe will give you life-long, faithful service. Costs just about half what you'd expect to pay for equipment of this kind and labor saving ability. Easy payment plan places it within reach of every shop owner—makes its installation cost come from the increased profits a Crowe brings you. Let us send you a machine for trial—use it in your own shop. Your money will be refunded if you are not fully pleased at the end of 10 days. Write us today!

LISLE MFG. CO., Box C, Clarinda, Iowa

A Continued Story of the Industry

READING MOTOR AGE every week is very much like following the growth of the automotive industry in story form.

It is as interesting as a fiction serial, and instructive to the point of making better and more prosperous dealers.

Reading MOTOR AGE every week when it comes, assures subscribers that they will stay up to date and profit accordingly.

MOTOR AGE

5 So. Wabash Ave.

Chicago, Ill.



Our SAMPLE CASE

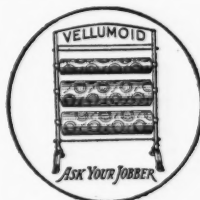


In my Sample Case I carry only representative products and call upon a big majority of the really worth-while retailers who are logical outlets for your merchandise.

I cover the whole territory once a week. Not only do I get favorable attention from the owner of each establishment, but the salesmen and the service men—even to the lads at the gasoline pumps—get my story.

If you are a manufacturer with desire for good representation to dealers just ask MOTOR AGE to write you about the small cost of the service I am prepared to render you.

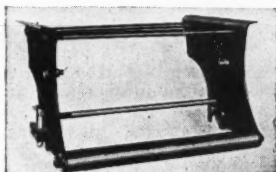
Sam P. Case
Care of MOTOR AGE, 5 S. Wabash Ave., Chicago



A quality product which saves the repairman time and trouble.

VELLUMOID
THE REAL REPLACEMENT GASKET MATERIAL
M'd by The Vellumoid Co., Boston, Mass.

Now's the time for—



A real money-making dealer proposition. The Bradley line of trunk and rack equipment is the most complete line on the market. Models for almost every car. Easily installed without drilling the frame. Be ready for touring season. Write now for complete information.

Bradley Motor Products Co.
Fostoria, Ohio

BRADLEY TRUNKS AND RACKS



\$16.95

BUY
REAMERS DIRECT!

This \$35 value-only \$16.95
Does 95% of jobs on
98% of cars

1 YEAR
free Servicing
ORDER NOW!

Biggest reamer offer yet! Eight high grade reamers listing elsewhere at \$35; our price only \$16.95. Handles 95% of all work on 98% of all cars. Staggered quality blades, ground semi-spiral. Serviced free for one year.

ORDER DIRECT FROM THIS
AD AND SAVE MONEY!

U. S. Tools & Parts Co., Atland Bldg.,
York, Penna.

The Tool Every Mechanic and
Service Station Needs

Not 20 minutes per valve but 30 minutes for the whole set of valves. Its smooth oscillating movement laps in the valve seats of any 6 cyl. motor with but 3/4 hour's use of electric current. Fits any 1/4" capacity drill. Makes Flat Rate profitable.

Cheaper by \$15 or \$20 than any other tool doing the same class work. Act now. Write for details. Kess Mfg. Co., Harrison Bldg., Philadelphia, Pa.



KESS VALVE GRINDER

IT'S THE BRAZIER FOR GARAGES AND
AUTO MECHANICS



Covered by patents
No. 70, 1 GALLON
EXTRA LARGE
BURNER
WRITE FOR
COMPLETE
CATALOG

The "ALWAYS RELIABLE" torches and furnaces really live up to their name. They will stand any amount of use, much abuse, and still give your men the kind of service they have a right to expect.

Jobbers sell at factory prices.

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Established 1876

Offices in New York City, Chicago, Fort Worth, Denver, Helena, Mont., San Francisco, Los Angeles, Seattle, and St. Thomas, Ont.

Dignified — Appealing

Regular and dignified contact is a paramount advantage in successful merchandising.

The Sample Case Department, to be a regular feature of MOTOR AGE, will permit that kind of contact—and at relatively low cost.

ANCHOR BALL BEARING SHOCK ABSORBER

A New and
Better Idea

Fits 95% of all cars

List Price \$10.00

Big discounts to dealers

A BIG SELLER. Write for circular and special dealer offer

ANCHOR ELECTRIC CO.
557 W. Jackson Blvd. CHICAGO



Kingston

OIL-AERATOR AND FILTER

The first device on the market that removes BOTH water and gas dilution and sulphurous acid content, and dust and abrasives from contaminated motor oil.

VACUUM FUEL FEEDING SYSTEMS

The famous "Oil-Vac," the vacuum fuel feeding device that obtains its vacuum from the circulating flow of oil—not the intake manifold. "No oil—no vac—no gas."

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Oldest and largest manufacturers of carburetors in America. Makers of the famous Kingston L4K, and the Kingston De Luxe Line for popular priced cars.

GOVERNORS

The ORIGINAL Fly-ball Governor for Fordsons using stub-tooth bevel gear drive. The highest priced governor for Fordsons (first cost)—the cheapest, SERVICE CONSIDERED. Guaranteed for the life of the tractor.

BYRNE, KINGSTON & COMPANY

Kokomo, Indiana

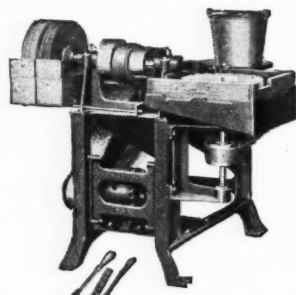
BRANCHES: New York, Chicago, Detroit

FAST AUTO GLASS EDGING

GRINDS
SMOOTHS
AND
POLISHES
EDGES OF
AUTO GLASS

Write today—Dept. K
MAKE THESE EXTRA
PROFITS

HENRY G. LANGE MACHINE
WORKS
DEPENDABLE SINCE 1882



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CHICAGO

Your Bearings Made to Order

Mail us your blueprints and requirements, and we will promptly send you estimates on Angular Contact Radial Bearings, Angular Contact Thrust Bearings, and Thrust Ball Bearings of all kinds. Our Engineering Department is at your disposal for consultation.

THE BEARINGS COMPANY
OF AMERICA
Lancaster, Pa.



Western Sales Office
1012 Ford Bldg.
Detroit, Mich.

PRICE
AND
BEAUTY



Faith

MOTOR
SAFETY

SIGNAL

Self Locking
Radiator Cap

Made for all Cars

Junior Cap **\$2.00** Junior Signal **\$1.50**

Senior Cap **\$3.00** Senior Signal **\$2.50**

FAITH MFG. CO., Inc.

2533-39 N. Ashland Ave., Chicago, Ill.

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the inter-
esting details
from our de-
scriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic—except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.

"Established Since 1904"

MORRISON

Automatic Double Range

Worm Drive
JACKS

Special model
for Balloons

Can't Slip or Tilt



Flexible steel "Sure Hold" cap prevents dangerous slipping. Long folding handle (36 to 72 in.) operates from standing position. Gets under overhanging bodies. Easy to work. Few turns and it's up. Built in 11 sizes for all service requirements up to 8 tons. Furnished as standard equipment on fine passenger cars, trucks, buses and Fire Apparatus for past 4 years. The Jack for YOUR shop. Write for sample for test.

THE WOODS ENGINEERING CO., Alliance, Ohio
General Sales Representatives for Canada, carrying branch warehouse stock:

Colonial Traders, Ltd., Chatham, Ontario, Canada.

TENAX

"Original Blue Sheet" COMPRESSED
ASBESTOS SHEET PACKING

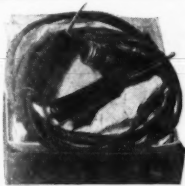
Makes a Quality Job

Thousands of repairmen have used TENAX Asbestos Packing exclusively for years for service in those parts of automobiles where there IS HEAT. Its convenience and quality have made it standard shop equipment. And TANPAC Fiber Sheet Packing, too, for packing where there is NO HEAT. Tough as rawhide, highest tensile strength.

Write for literature covering the entire
ADVANCE Line

Advance Packing & Supply Co.
808 Washington Blvd. Chicago, Ill.

Pacific Coast Distributors:
Allied Industries, Inc., Los Angeles, San Francisco, Portland, Seattle



The New Universal TROUBLE-SHOOTER

For locating grounds, opens and shorts. For circuit testing. The only TROUBLE-SHOOTER for Radio testing. Operates on A.C. or D.C. Fits any standard receptacle. You get your money back if you are not satisfied. Order yours today.

Price
Only \$3
plus
postage

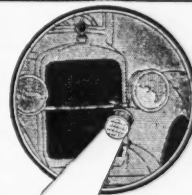
Universal Test Equipment Co.
2939-41 N. Oakley Ave. Chicago

THE WALDEN FORE-LITE

Mounted ahead of the radiator and operated like a spotlight from the instrument board, the WALDEN Fore-Lite satisfies a need hitherto filled by make-shifts. Universal fittings. Selling fast wherever introduced. Ask your jobber, or write us direct, giving his name.

THE WALDEN CO.

2017 S. Michigan Ave. Chicago



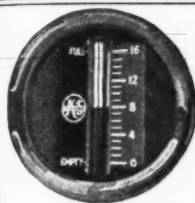
More
Power
Less
Fuel

Zenith - Detroit Corporation, Detroit, Mich.

KISSEL

CUSTOM BUILT

Kissel Motor Car Co., Hartford, Wis.



The K-S GASOLINE Telegage

A gasoline gauge on the Dash. Note full page in colors in this week's issue of Motor Age also half page Saturday Evening Post, May 15th. Write for description and proposition to the trade.

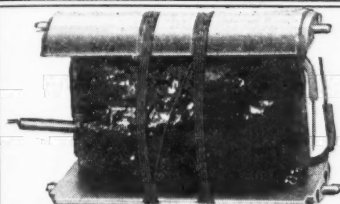
KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Mich.
Chicago Branch, 2450 Michigan Boulevard



QUALITY—PROFIT—TURNOVER

American
Hammered
Piston Rings

American Hammered Piston Ring Company
Baltimore, Maryland



Magneto Windings

A Magneto is no better than its winding; you must have the best. The very finest insulation, hot spark, low speed. Beautiful rough gloss varnish finish; no better winding made. Each winding packed in individual box. ALL MODELS. Send in your Old Cores. Guaranteed.

Severson Magneto Engineering Co.
538 Fernwood Ave., TOLEDO, OHIO

a real water circulating pump for FORDS and FORDSONS

PUMP FOR FORDS \$5.00
PUMP FOR FORDSONS \$15.00

HASTINGS
NIMS PUMP



PROTEX
TIRE CHAINS Absolutely Stop Skid
Protex Chain Co., Inc. Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.
Waynesboro, Pa.

TIMKEN

Tapered
ROLLER BEARINGS

NEXT WEEK

—is the time to read next week's issue of MOTOR AGE, as you are reading this week's issue this week.

MOTOR AGE

5 So. Wabash Ave.

Chicago, Ill.

The Original
Bosch

Franchise details for selling ORIGINAL BOSCH Automotive Equipment will be sent to any Distributor, Dealer or Service Station on request.
ROBERT BOSCH MAGNETO CO., Inc.
109 West 64th Street New York, N. Y.



ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887.

CLASSIFIED ADVERTISING

PARTS

AUTO PARTS

SAVES 50% TO 75% ON ALL CARS

New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

INDIANA AUTO PARTS CO.
608-10 N. CAPITOL AVE., INDIANAPOLIS, IND.
LARGEST CAR WRECKERS IN INDIANA

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C. L. PARKER

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American and foreign Patents secured. Searches made to determine patentability and validity. Patent suits conducted. Pamphlet of instruction sent upon request.

McGill Building, WASHINGTON, D. C.

BUSINESS OPPORTUNITIES

OLD AUTOS LOOK LIKE NEW—Two fellows have invented an auto finish applied without brush in 15 minutes. gets hard as glass in two hours. No rubbing, no painting. Just beautiful finish. Price \$2.00 for any car. Money refunded if not pleased. Send today and have your car like new. Live wire men with small capital can make big money handling this. Wonderful opportunity. Reserved territory. B. B. Specialties, 331 E. Walnut, Philadelphia.

HELP WANTED

TIRE SALESMEN—We have a clean, well balanced, fast selling line. The tires are handsome, durable, honestly made, on a quantity production basis. Some excellent territory still open for the man who is looking for more than a mere job. Address BROWN RUBBER CO., Lafayette, Ind.

SALESMEN WANTED in several States to handle The Winther Spoke Tightener. Every shop needs one. C. W. Winther, Fresno, Calif.

BUSINESS OPPORTUNITIES

FOR SALE—The best located Garage and Accessory place in a booming South Georgia town. A money making place for a live, awake party. Box 6265, Care of Motor Age, 5 S. Wabash Ave., Chicago, Ill.

HOUSE OF A MILLION AUTO PARTS

The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

DOUGLAS AUTO PARTS CO., INC.
2003-5-7-9 South State St., Chicago, Ill.

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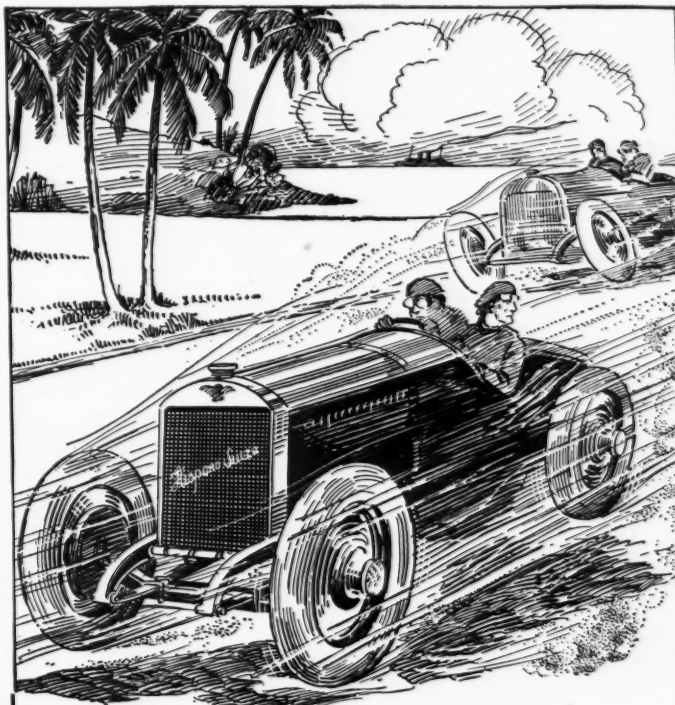
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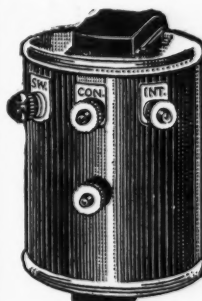


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Motor Parts

- *Pistons
- *Piston Rings
- ✓Piston Inner Rings
- *Piston Pins
- ✓Piston Pin Bushings
- ✓Piston Pin Retainers
- ✓Piston Pin Set Screws
- ✓Valves
- ✓Valve Rollers
- ✓Valve Lifters and Adjusting Screws
- ✓Valve Lock Washers
- ✓Valve Springs
- ✓Valve Guides
- ✓Valve Cages
- ✓Overhead Valve Parts

- *Timing Gears (Fabric & Metal) and Chains
- Oil Pump Gears
- Distributor Gears
- *Fly Wheel Ring Gears
- Generator Shafts
- Generator Bushings
- Starting Motor Bushings
- Coils
- Bendix Parts
- Ignition Parts
- Ignition Cable
- *Spark Plugs
- Rebuilt Armatures

Connecting Rods—Rebabbited for Ex-✓ change

- *Connecting Rod and Main Shaft Bearings
- Connecting Rod Bolts and Nuts
- Main Shafts
- Bearing Anchor Screws
- Shims
- Water Pump Shafts and Bushings
- Water Pump Impellers
- Camshaft Bushings
- Cylinder Heads
- *Gaskets—Felt—Cork—Copper—Asbestos
- Sheet Packing
- Gasket Cement

- Radiators
- Radiator Cores
- Radiator Hose
- *Fan Belts

Chassis Parts

- *Axle and Drive Shafts
- Axle Shaft Keys and Nuts
- Differential Cases
- *Ring and Pinion and Differential Gears
- Gear Rivets
- Pinion Shafts

- *Universal Joints and Parts ✓
- *Transmission Gears
- *Ball, Roller and Thrust Bearings

- *Springs
- Spring Center

- Spring Clips
- Spring Shackle Bolts and Bushings

- *Steering Knuckle Bolts and Bushings and Tie Rod Bolts and Bushings

- ✓Steering Shaft Bushings and Half Nuts
- ✓Clutch Discs
- ✓Clutch Disc Facings
- ✓Rim Parts
- *Brake Lining
- Brake Lining Rivets

- Battery Parts
- Lamp Bulbs
- Lenses

- Starting Cranks
- Fenders
- Mufflers
- Lock Washers
- S. A. E. Bolts, Nuts and Screws
- Tubing—Flexible and Copper
- Small Wrenches
- Small Reamers

*Indicates Major Parts

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